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After the etching by Martial from a drawing by A. Varin

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JOURNAL OF THE
AMERICAN INSTITUTE OF ARCHITECTS

Vol. VIII FEBRUARY, 1920 No. 2

Shadows and Straws

Crossing the Continent
January 3–7, 1920

FROM THE WINDOW of the slow-plodding train, laboring its way over the Great Divide, we look upon a wide, uneven expanse, girded in every direction, seemingly, by low and jagged hills. A flood of brilliant, dancing sunshine descends over all. It quickens the sparse dried grass into a rich, warm pattern of browns and yellows. On the declivities, in the hollows and gullies, patches of snow lie white, adding a sparkle to the pattern of color. Now and then, sometimes in twos and threes, sometimes in hundreds, the brown-backed, shaggy-coated, white-nosed cattle stand at browse on the range. To the passage of the lumbering train they give not the slightest heed.

Through the bare branches of the occasional clumps of cottonwoods there glints the white of a house, or the more joyous flash of red barns or silos. The January sky is soft with the mocking promise of the great enchantress. Everywhere, over all, hangs the spell and the mystery of that utter tranquility and repose which spring from vast spaces and great silences. Only the cattle, the greyish brown stacks of alfalfa piled against the barrenness of winter, the far-scattered habitations, tell the tale of the pioneer race that was, that still barely is, but which the coming decades will know no more. One is conscious, vividly and keenly conscious, of the beginning of the great transition. From the problem of exploration, the lure of adventure, the hardship of settlement, we have emerged into the vastly more difficult era of occupancy and organization.

I turn from the scene reluctantly and open the portfolio of work to be done. Almost the first paper that greets my eye is an editorial torn from the pages of one of our weekly architectural journals. Across the top of it, in the handwriting of him who sent it to me, are written the words, "Oh for a Sullivan to this Gilbert!" Dear me, out here on the plains of Wyoming, that editorial does read like a part of "Iolanthe" or the "Mikado." Yet even more does it seem to be a part of Jacob Abbott and the great Rollonian epic.

By it I am adjudged to be guilty of heresy. Or is it schism? I have never been sure that I had wholly escaped from the confusion those words brought to my childish ears as I first heard them entangled with "hardness of heart." I remember that they seemed quite incompatible with the white robe, the gentle voice, the kneeling parishioners, and especially out of harmony with the open window that gave upon green leaves and blue sky. "Heresy, schism," and "all hardness of heart,"—and now I am indicted for all of these crimes. From a garbled phrase, distorted in meaning (not wilfully, I hope), I am made to appear as having written something under "Shadows and Straws" (that title seems also very much to annoy my accuser) that can be identified as a heretical or schismatic lapse from the narrow paths of editorial virtue. I am taken *flagrant délit*. By my own utterances, it is discovered that I am conducting a mischievous plan of keeping architects from joining the Institute, of trifling with the fortunes of that body, and generally exhibiting myself as a disreputable character.*

*" 'Some day,' says the editor of the Journal of the American Institute of Architects in the November issue, under the very appropriate heading 'Shadows and Straws,' 'we shall learn to shun the man who calls himself practical, as we would an icthyosaurus, for we shall have learned that before starting out to "do something," you must have a philosophy, based on the whole problem.' . . .

"Further on in this issue of the Journal we learn that its editor has been appointed to the executive committee. Is the editor's opinion as to the value of practical men shared by a majority of this committee, and does this statement in the November Journal reflect the opinion of that committee?

"President Kimball in his address before the Nashville convention urged that a thousand new members be secured in 1919. Does anyone suppose that this desirable increase in membership could be reached at any time if the policy of the Journal, which it is natural to assume reflects the policy of the Institute, is opposed to the very essence of the efficient practise of architecture?"

NOTE.—Without comment, but with the suggestion that members of the Institute give some attention to what may be going on, the following paragraph, quite contradictory, is quoted from the succeeding issue of the publication in question:

"President Kimball's strong appeal for larger membership has not resulted in securing even a small proportion of the 'thousand

in 1919' that has been considered necessary to securing for the Institute a more representative standing. In fact, it becomes more and more apparent that the type of men whom the Institute regards as eligible have largely become members."

Shades of Melancthon and Luther—of Cotton Mather and Roger Williams. Do I hear the soft ripples of thy laughter? Yes, I think I do. And as I evoke the vision of a famous pulpit out of the past, I even seem to see a merry twinkle in the eyes of the great preacher of Edinburgh.

"Do You Know," says a fellow traveler, "that we are now following the 'Oregon Trail?,'" and we recall, as best we can, our geography and our Parkman. At least we remember the names of the river valleys—the Platte and the Sweetwater, the Green and the Bear, the Portneuf and the Snake, the Malheur, Powder, Grande Ronde, Umatilla, and then the difficult choice of the toilsome climb over the Cascades, or of rafting it down the swift waters of the Columbia. Over these bare ranges the stolid oxen plodded their twenty miles a day. By night they sought their only nourishment in the scanty and unaccustomed herbage. Thinner and thinner they grew, as ever they climbed and descended; thousands of them died at their patient task. Their bones long marked the trail in gruesome heaps that whitened in the sun.

As to the Word "practical" (dare I meddle with it again?) and practical things, there is, for example, the great American institution known as the sleeping-car. A remarkable invention, we say, and we bow down and worship it. What, we ask, could be more practical? How else, in so small a space and at so low a cost, could we give beds to thirty or forty people while we hauled them from town to town in the middle of the night? Yes; the sleeping car no doubt passes for practical, but not with me. I do not particularly object to the open forum idea of going to bed; I can be deprived of oxygen and stomach those oxides of carbon with the same stoic American fortitude that endures the roasting process of steam heat; I am uncomplaining of the particularly American inconsiderateness with which late comers burst into conversation and awaken all the sleepers; I bear with heroic equanimity the raucous gurgitations of the tired business man as he sonorously serenades the night. But in the morning, when I am driven, as one is, on a long journey, into the gladiatorial arena of the washroom, where are assembled the jovial Ablutionist, the blithesome Saponificationist, the meticulous Dentitionist, and (I grieve to mention him) the unspeakable Expectorationist, all at their several shrines and devotions, I cannot give over the hope that the inventor of the sleeping-car, and all those who have contrived, devised or otherwise contributed to its perfection (?), together with their heirs and assigns, shall, in the life beyond this, be condemned forever to travel the infernal regions securely locked within one of these steel wagons. Some like them, I dare say. I do not, and, I say so in full consciousness of the trials and tribulations of the Oregon Trail. I am by no means convinced that by the aid of a sleeping-car I shall ever live more fully and completely than did those who walked beside their ox-teams.

Looking upon the marvelous brocades that Nature has embroidered on these rock-strewn hills of reddish brown earth,—never was a court darling more rarely adorned,—or studying the glorious tapestry of frosted conifers, the noble architecture that raises those rugged domes against that blue sky, clothing them the while in royal robes of rose and violet and green and black, while draping their bases with a flowing train of white, I am again reminded of the fallacy of the practical.

Look at Those cañons of downtown New York, for example. They, and what has followed them, are entirely due to the handiwork of the practical man. It was a practical man who invented steel construction for buildings. It was another such who built the first one. Then there came an epidemic, spreading itself up and down the narrow streets that were little more than the cow-trails of New Amsterdam. The disease spread, for behold that practical men rushed pell-mell over each other in their mad obsession to crowd ever more and more human beings onto a square foot of land. It mattered not whether for work, or rest, or play. Sunlight vanished into the depths of gloomy, towering walls. Oxygen vanished with it or was artificially propelled within reach of the ever-swarming humans. The practical elevated railway was supplemented by the practical subway with its practical stations and their practical exits and the rows of practical advertising decorations. To cap the climax, the practical steel car was evolved, with its minimum of seating and its maximum of standing-room. Already, some unknown practical genius had invented the strap by which to hang on.

Everywhere we turn, nowadays, we welter in the morass of the practical—the splendid legacy left us by the practical men that are gone. And yet it was not their fault. They took, as did all and as do we, the word practical as an individual right. They proceeded to look after their own practical objects. We now flounder in the era of waste, congestion, disorder, and disorganization which were the inevitable result of not applying the word practical to the whole community instead of allowing it to be appropriated as the exclusive right of individuals or corporations.

Thus, for the most part, most of our modern urban endeavor is given up to correction. We apply one practical remedy after another, urged on by the ever-growing consciousness that behind us are swarming the millions of the future. What we shall do with them in such places as downtown (or even uptown) New York, or in the loop in Chicago, or in the traffic center of Philadelphia, who knows? No one. But the real question is, who cares? When there are enough who really care, deeply and sincerely, we may be able to achieve a practical solution.

Today we work in palliatives, largely. Seldom are we bent on great constructive things, or working to a great, far-seeing and far-reaching plan. We pay for the present by drawing bills on the future. We are enmeshed and engulfed in the havoc wrought by our foremost citizens, who were looked upon as men of great practical sagacity. The answer, in the last analysis, is this:

When, instead of a system where Business, Commerce, and Industry can hire or buy all Knowledge, Science, and Skill in order to make profits, we shall have created a system where Science, Knowledge, and Skill develop, direct, and control Business, Commerce, and Industry, as agents for the welfare of mankind, we shall then be in a position to discover what is truly practical and how to follow where it leads. We shall then have a true professionalism, and we can have it in no other way, because professionalism means Truth which is greater than any part and professionalism means Science, as an inexorable law that we must eventually obey. It is because of these things that the Inter-Professional Conference, described in the last issue and now slowly taking form and shape, is of such tremendous import.

Swift flows the Grande Ronde, but swifter flows the Umatilla, and now we have crossed the last mountain range, winding for hours along crooked valleys with dark waters flowing below, with glittering snow-encrusted trees, shining white battlements. So we emerge to the narrow plains lying wrapped with a thick mantle of snow and the Umatilla is merged with the majestic Columbia. No longer are the mountains joyous or solemn. They have grown grey and worn under the leaden sky. The open water of the river is marked with a black irregular path. Blocks of ice lie piled among the boulders and everywhere are the scars and wounds of the long ages of erosion. The fog shuts down with the coming of night and the mountains become greyer and ghostlier; but the Oregon Trail is behind us, nevertheless, and the darkening precipitous heights that seem to place us in some Norwegian fiord do not make it any the less a promised land. Shall I not sleep tonight in a bed, with fresh air and open windows, and, most blessed promise of all, shall I not know the morning joys of a large, vast, and glorious Solitude?

Chanticleer, January 13, 1920

THE GREAT CANYON of the Columbia is engulfed in a solid mass of white fog. In billowy shapes and forms it rolls away, like a shadowy river, eastward, westward, to the limits of our vision. From the depths immediately below we measure its intensity as the black outlines of tree and branch are sharp, then broken, then fragmentary, and then no more. Here and there, at the foot of the precipitous cliffs, the barren summit of a conifer lifts itself, dull and skeleton-like, above the motionless sea. Over us the sun shines bright, the sky is dazzlingly blue, the air is soft and caressing. To the north, barely peering above the nearer hills, we mark the sparkling white crest of Adams. Hood we have already seen, sternly majestic in its white robe, the stately sentinel of Portland.

Slowly, carefully, feeling our way cautiously over the heavily rimed roadway, we descend into the Canyon. By skilful circles, we wind our way spirally around the bold protruding cliffs. We hang breathlessly at the edge of the precipice itself, at times, and then we glide slowly into the weird recesses of the forest. The Canyon walls rise almost within touch and disappear into the fog above. At intervals, the sunlight fights its way through unseen pathways, lighting up the woods with a trembling luminosity. Finally, we drop down where the fortress of fog is not to be taken, and here all chatter ceases, and we steal silently upon our ghostlike journey. Only the muffled hum of the engine breaks the heavy stillness of the depths. Chanticleer and the sunlight are hundreds of feet above.

At the Multnomah Falls we alight and climb the icy steep to where the bridge spans the gorge and looks down on the pool. High high above us, the stream breaks over the cliff. For full six hundred feet it falls, in one great shimmering veil, until it is caught in the strong arms of the rock-bound pool. The ice lies all about. The mountain sides are painted with its sparkle and the green of moss. Above the gentle wave of blue water that wells over the edge of the cliff, there hangs the deeper blue of the bright sky. We are gnomes, in a fairyland of wonders, where man has no significance.

Shasta, January 15, 1920

IN THE EARLY MORNING, ere Shasta was aware, I saw her in the far distance. The matin light broke clear upon her, in the full radiance of her charms, and I looked forward with eager anticipation. All day I should woo at her feet, the lover of her loveliness. Alas! When we again came in sight of her, after winding among the lesser heights of the Sis-

kiyous, her face was wrapped in a fleecy cloud. All day long she played the coquette. Now frolicsome, now defiant; now the mocker, now the indifferent. Never once again would she show us her crown of beauty. She whirled her mantle this way and that. Anon it would stream forth in a feathery spray, as though about to break and disappear. In great white drooping plumes she decked herself. Time and again she seemed on the very verge of throwing them disdainfully aside. But ever she drew them in, wrapping them the more compactly and binding them, impenetrable, about her stately head. With the coming of night she called her attendants from far and near. White clouds, grey clouds, dark clouds, all came in answer to her call, and in the waning light, when we stood at her very feet, she wrapped herself ever closer and closer, as though in utter defiance. But I love thee still, O Shasta! And I shall come again to woo, coquette that thou art.

San Francisco, January 16, 1920

FAR, FAR BELOW, lies the Pacific, folded in the inexpressible glory of the sun's passionate adieu. Her waters lie in proud yet glad submission—a languorous, golden ecstasy. They stretch afar into the dim mysteries of the veiled horizon, a flaming, joy-beckoning, soul-enchanting pathway to the Golden Gate. Its narrow, high-walled waters now lie almost beneath us. The more capricious Twin Peaks look mockingly across at solemn Tamalpais. Alcatraz shows the white shine of her prison as she sits in her solitary island splendor. The receding city resolves itself into a curious contracting plane, as though giant fingers were at work after the manner of the magician. The sentinel hills surrender their dignified eminence and vanish, miracle-wise, into the ever-receding, ever-contracting plane. The patterned rhythmic crossings of the streets are turned into a halftone screen of white lines.

Suddenly, to the right, I become aware of my companion bird. He had preceded us into the heavens and I had lost him in flight. Now, all unawares, he has stolen up beside us. His wings stretch out until the tips seem about to touch our own. I am more conscious of a perilous nearness than I am thrilled with a sense of companionship. From his seat behind the driver, my companion waves a signal of recognition. It comes strangely indeed across that intervening space, and it is almost with timidity that I raise my hand to respond.

Without other recognition we float in the heavens. Side by side, we glide mysteriously above the world. It is a thrilling moment of emancipation. Our forward movement is broken only by the gentle cadences of our rising and falling, as though we swam, gossamer-winged, upon long slow billows of air.

Suddenly, without warning, my companion bird swings away as though in coquettish flight and for a moment I am troubled with a curious feeling of joy and alarm. He yaws and careens in the air below, now pausing in haunting flutterings that seem to be without motion, now darting earthwards, skywards, eastwards, westwards, finally to sail serenely away out of my sight.

And then again, without warning, I am conscious of a terrible careening. Our wings shoot suddenly into perpendicularity. The earth is leaving its accustomed whereabouts. Even though fully conscious of the strap that holds me in place, I reach for something to which I may cling. The seconds go by in a fearsome procession, and then all bearings disappear. Earth and sky are gone awhirling. What happened I have not yet comprehended. By some miracle, some wonder of gyration, we too were again sailing serenely. But never was there such an exquisite, unspeakable thrill of peril and of joy. The earth was restored to its normal position in the universe. The Pacific lay in a softened golden plane below. The horizon was filled with deeper mystery. The heavens had become charted with untold myriads of traveled paths, to which man had finally found the key—and I had ridden upon one of them!

In the first rush of a partially restored confidence I am supremely happy. I think that I even smiled in pleasurable content. Did my driver guess that I was smiling? I shall never know, but once again there came that fearful careening. Looking down with what courage I could claim, I guessed that we were banked in a slow pivotal motion. The earth turned slowly below. How long could we maintain that fearful angle? Could we ever again regain our equilibrium? In what giant forces were we caught helpless? Such were the thoughts that whirled through my brain, until there came a final careening, a downward darting, a spiral whirl. The beating of my heart suddenly ceased. With a vague consciousness I notice that the engine valves are no longer tripping. For a moment, utter silence, and then there comes the soft passing of the air as it rushes by. Downward we float, with an ever-increasing speed. Below us lies the bay, growing ever more and more vividly green, as we dive headlong toward it.

Five minutes later—or was it three?—our wheels touch earth. We come to a stop. An attendant turns us about and we rumble back to the perch from which we sprang to flight. I clamber out, to greet the laughing faces of my companions. But I notice that my driver instantly turns to light a cigarette. Is it mere nonchalance? I must think it over.

C. H. W.

The Crisis in Architecture

By ARTHUR J. PENTY

I. AN ECONOMIC FORECAST

The Young Man and the Profession

THE decision of the Executive Council of the Post-War Committee* to recommend to the profession that it "work steadily toward the creation of a vocational Guild to include all those who earn their living in the practice of architecture and that to this end the Institute should set up machinery for the establishment of definite affiliations between all national organizations in the building industry," marks a stage in the development of thought on the problems confronting the profession that is not without significance. It demonstrates beyond doubt a growing consciousness on the part of the profession that the existing order of architectural individualism is rapidly coming to an end, if it has not already done so. The recommendation is, I am persuaded, a step in the right direction and perhaps it is all that for the present may be regarded as practical politics, but it has clearly no finality about it. For the central problem of the profession —the problem of how the young man entering it may establish himself in practice—remains unsolved. Though the Committee recognizes that the opportunity afforded by competitions is not the right method, it is yet unable to suggest an alternative.

Now this is a serious defect in the scheme;† so serious, in fact, that if there were any reason to suppose the factors governing the problem were unchangeable, it would be sufficient to condemn it. To fail here would be to fail absolutely, since upon our success in dealing with this problem, both as regards the future of architecture and the integrity of the profession, the possibility of making Guilds a living reality ultimately depends. If we cannot introduce order here at the vital center, it is seriously to be doubted whether it can be introduced anywhere. If the accidents of birth and fortune are, in the future as in the past, to be the determining factors in the career of the individual architect, it is clearly impossible to formulate any consecutive policy, plan, or scheme that may not be upset by any chance combination of circumstances, since there will be no possibility of abolishing that confusion of function which lies at the heart of the problem. To secure integrity of function, means must be found of ensuring that every man in the profession shall find the work that he is most fitted by natural endowments to do. Until the right work is able always to find its way into the hands of the right men, the revival of architecture in any widespread or popular sense remains an impossible dream. Left to himself, each individual architect will continue to work for his own personal success as best he can, and, in such circumstances, the welfare of architecture becomes a quite secondary consideration. The profession will remain weak and impotent, for it will lack any feeling of solidarity. It will be unable to enforce any discipline, or uphold any standard of professional conduct among its members, higher than serves their immediate interests. The wider and more fundamental issues will be neglected. Nay, until some solution is found for this problem, the organization of the profession on a Guild basis remains an empty formula, for the young men in the profession, who alone can bring the enthusiasm necessary to impart to the Guild a feeling of living reality, who alone can supply the driving force necessary to its establishment, will take no interest in it, since, so long as it provides no solution for their problems, they will be unwilling to identify themselves with its success.

Architecture or Industrialism

To get the problem in a proper perspective it is necessary to remember that the difficulty in which the young man finds himself today is not peculiar to architecture. In every branch of industry, the rising generation finds itself moving into blind-alley

*The resolution to which Mr. Penty here refers was as follows: "That state societies should include draughtsmen as well as architects and steadily work toward the creation of a vocational guild to include all those who earn their livelihood in the practice of architecture. That state societies should be organized independently of any Institute connection, and that there should be no restrictions as to holding office therein. That they at once, upon organization, should begin the establishment of relations with other local groups of technical men, trades and crafts organizations, in order that standards of practice may be formulated and that there may be developed a strong influence toward securing a higher standard of public work."

†The particular conclusion of the Post-War Committee here referred to was as follows: "The Committee recognizes clearly the problem of the young man entering the profession and believes that that question is one for serious study on the part of the whole profession, yet it does not believe that the competition is the right method by which the young man should be encouraged to establish himself in practice."—EDITOR.

occupations, for the ladder by which the older generation rose to positions of prominence has been destroyed by the growth of limited liability companies and machine production. This raises the question as to whether a system of industry that makes no provision whatsoever for the young can possibly endure. The fact that industrialism shows itself to be antagonistic, not only to architecture and the higher interests of mankind, but also to ordinary human interests, and that in spite of the prodigious efforts of reformers to find a remedy it steadily goes from bad to worse, suggests that there is something fundamentally and organically wrong in its very structure. Hence it is that before it is possible to formulate a policy for the future of architecture, it is necessary to make up our minds as to the future of industrialism. We must determine whether we ought to aim at adjusting architecture to the needs of industrialism, or whether industrialism will before long find itself compelled to adjust itself to the needs of architecture, which needs I am persuaded are finally identical with the eternal needs of human nature.

Now it is to be observed that the fact that the Executive Council of the Post-War Committee has decided to recommend the profession to work toward the creation of vocational Guilds, suggests that within certain limits it has made up its mind that the present individualistic régime is coming to an end, while the fact that the demand is so often made that architects should be given an engineering training, suggests the consciousness of some incompatibility between architecture and industrialism. To men of another age such conclusions would have been inevitable. They would have perceived the irreconcilable antagonism between the quantitative and qualitative ideals as postulated by industrialism and architecture. But, unfortunately, in our generation clear thinking on fundamental issues has been entirely undermined by the theory of evolution, which presents the transition from earlier to later social conditions as a change from a lower to a higher form of social organism, entirely ignoring the fact that a difference of principle is involved. By such specious arguments people have been persuaded to acquiesce in changes, which in their heart of hearts they knew were not for the public good, and resistance to the growth of evil has been overcome by promulgating the doctrine that the right policy was to accept all change as inevitable, and to adjust ourselves to constantly changing conditions. In the sphere of architecture, this teaching has been followed by the demand that the architectural training should give way to an engineering one, in order to adapt architecture to the circumstances of modern industry. That architects would be all the better for some engineering knowledge I am willing to allow. But that an increased competence among architects in this direction would solve the problems confronting the profession I do most explicitly deny. And I deny it because, as the problem is primarily economic rather than technical, the same forces which are destroying the position of architects today must inevitably destroy the position of the engineers tomorrow.

The Financial Deadlock

Economic reasoning leads me to the conclusion that it is only a matter of time—a few years at the most—before engineers will follow architects into the melting-pot, for a kind of economic gangrene is overtaking the social system. Architecture is a thing on the fringe of industrialism and was therefore the first to suffer when the shrinking process began. But engineering must follow, for there can be no stopping the disintegrating process until the most cherished principles of modern finance are successfully challenged. That sooner or later this will be done, I do not doubt, for there is no denying that finance in these days has reached a deadlock—a deadlock that refuses to yield to time-honored treatment. The explanation for this is simple. Modern finance is committed to an absolutely impossible principle; namely, that all money should bear compound interest. Obviously, there is a limit to development upon such lines, as the famous arithmetical calculation that a halfpenny put out at five per cent compound interest, on the first day of the Christian era, would amount to more money than the earth could contain, clearly demonstrates. Yet what we call sound finance refuses to recognize any limitations. In consequence, it is loading industry with an accumulation of overhead charges under which it staggers. One of our financiers, Sir Oswald Stoll, recently attacked this system of investing and reinvesting surplus wealth, affirming that, if wages could be reduced to the lowest rate capable of keeping body and soul together, productive industry could not be made to yield the returns which the conventional system of invested funds now requires; and declaring that any attempt to enforce the old system under tht new conditions is foredoomed to failure, and that should it be persisted in, the time would soon arrive when the capitalist system will be buried under its own ruins.

Spending Surplus Wealth

Now it is impossible to say definitely what will happen in the future, but we can say, in this connection, that one of two things must happen. Either the conventional system of finance will be persisted in and the shrinking process continue until the capitalist system breaks up and anarchy overtakes us, or we shall return to the ways of former times,

and surplus wealth, instead of being reinvested for the purposes of further increase, will be spent. If it is spent, we may be assured that it will be largely spent upon architecture and the crafts, for this is the one direction in which surplus wealth can be consumed in large quantities. The changed spirit which would necessarily accompany such a changed financial policy would automatically solve for us half of our problems. For what, after all, are half of our difficulties due to but the desire of the public to get their building done as cheaply as possible, in order to have a surplus to invest. It is this spirit that makes them so fractious, which inclines them to take a narrow view of each situation, that makes them put up with ugly buildings on the assumption that they are cheap, and to refuse work to good architects because they suspect their work will be expensive. As things are today, I often think the public don't mind how much they spend on a building so long as it is ugly, since, so long as it is ugly, it is assumed it will be cheap and no questions will be asked regarding its cost. But if it is beautiful, then their suspicions are aroused, and they are willing to listen to any self-interested person, who, fearing the competition of higher standards, is always ready to praise the work of better architects and to suggest it is expensive. My experience leads me to suppose it is just as difficult for an architect who understands the art to get a reputation for practicality and cheapness as for a beautiful woman to acquire a reputation for goodness. Just as a plain woman begins with a presumption in favor of her goodness, the bad architect begins with a presumption in favor of his cheapness and practicality—qualities that a good architect, with the utmost care and economy, cannot be supposed to achieve. This is the reason why good architects find it difficult to get hold of small work. If they have not the social position enabling them to handle the big commissions, the chances are they get little to do. It is "Cæsar or nothing" every time.

I said that if surplus wealth be spent instead of being reinvested, it will be largely spent upon architecture and the crafts. It will not be spent upon engineering, for it is apparent, when we think about it, that the demand for the engineering type of building is closely connected with the desire to extract the utmost returns on the capital invested—a motive that will entirely disappear when surplus wealth is spent. It is evident, for instance, that the skyscraper and other steel constructed buildings owe their existence to a quite abnormal state of affairs—to the high prices of city sites and speed in construction, so essential if profits are to be made and industry is to carry heavy overhead charges. All these things hang together and will fall together. Remove the motive of profit-making and building will be undertaken from a different motive. It would result in a demand for good, sound building instead of commercial building, for it would be a demand for a different type of building for different uses, and architecture would get a chance again.

The Intellectual Gulf

While it may safely be predicted that the abandonment of current principles of finance will give architecture a chance again, we may be equally sure that we shall not be in a position to take advantage of the great opportunity that changed conditions will bring, unless, in the meantime, we pursue a policy that will enable us to bridge the gulf between ourselves and the thought of the age; the absence of a common bond of sympathy and understanding between us and the public, is, in spite of our economic troubles, perhaps our greatest difficulty today. That some adjustment is necessary, all architects are willing to admit, but hitherto the advice we have been offered is to seek adjustment on the plane of current practice. But that, I am persuaded, is no solution. The true policy is not to seek adjustments in regard to externals but in regard to internals, or, in other words, we must seek to bring ourselves in relation to the best thought of the age, confident in the belief that the thought of this generation will be the practice of the next. Let us face the fact that there is no immediate solution for our difficulties any more than there is for the general social problem, but a solution can be found, and will be found, if we pursue, for a generation, a consistent policy based upon an intelligent anticipation of the future. I am led to this conclusion by a consideration of the successful architectural movements of the past. The revival of Roman architecture at the time of the Renaissance was a practicable proposition because the Humanists had, by their labors, brought into existence a public favorable to such a revival. The success of the Gothic revivalists in securing public support was due to the same cause. The Anglo-Catholic movement had created an interest in Gothic architecture which in those days was called Christian Art, and the architectural movement was floated upon the religious movement.

At the present time there is no popular or cultural movement prepared to give us support, and so we flounder about, first this way and then that, hoping by minor adjustments to make ourselves acceptable to the public. But there is a movement arising that will be a power in the land in the course of a generation or so, and if we are wise we shall study its psychology and seek to enrich its culture, for I am persuaded there is nothing in the nature of things why it could not, with sympathetic treatment, be turned from its present anarchic paths into those of reconstruction upon the lines we should like to see

things go. I refer of course to the Socialist movement —the fruitful source of new philosophies, new heresies, and new orthodoxies. It is a force with which we, as others, in the future will have to reckon, for it is the great driving force in the modern world that, for good or evil, must triumph because of its faith and conviction. There is no greater opponent of Socialism than the French psychologist, Gustave le Bon, yet he writes in this connection: "In religion, as in politics, success always goes to those who believe, never to those who are sceptical, and if at the present day it would seem as if the future belongs to the Socialists, in spite of the dangerous absurdity of their dogmas, the reason is that they are the only party possessing real convictions. The modern governing class have lost faith in everything. They no longer believe in anything."*

The Idealism of Socialism

Now this opinion is worth pondering over, for, if true, it should profoundly influence our architectural policy. If the Socialist movement grows and continues to grow, in spite of persecution in its early days and the utter inadequacy of its own economic formulas, which are constantly changing, it can only be because it has a grip on something far more fundamental than any economic formula. That something, I submit, is the communal spirit which is natural to man, that existed in the Middle Ages, but which modern society denies. The Socialist movement gathers strength because it combines a protest against the existing social order with the promise of a new one.

At the moment it is attempting the impossible. It is attempting to graft a communal system upon our existing industrial system, unaware of the fact that industrialism and communalism are as antipathetic to each other as are industrialism and architecture, and like us they are beginning to find it out. The growing consciousness of this antagonism is at the same time the explanation of the excesses of the I. W. W. in America, which seeks to destroy industrialism, and the medievalism of the National Guild Movement in England which aims at transforming it. This latter movement may be said to symbolize a change in the current of thought that has in the last few years turned its back on modernism and increasingly moves towards the medieval point of view. Judging by present tendencies, I am disposed to think that it will not be long before medievalism will be triumphant everywhere, for medievalists are the only people who are not suffering from disillusionment in these days. They profit by the failure of modernism.

Now, it is necessary, if the position is to be understood, to make it clear that the medievalism of these days is a very different thing from the medievalism of the days of the Gothic revival. For, whereas the latter was aristocratic, ecclesiastical, and romantic, the former is democratic, philosophic, and economic. It has not been led to believe in the Middle Ages by yearnings for romance but by a consideration of hard economic facts—such facts, for instance, as that the town worker in the fifteenth century was about twice as well off as the modern town worker in the days before the war, while the agricultural laborer was in nearly as good a position. Acquaintance with such facts makes people think. The old idea that the Middle Ages was a time of ignorance, poverty, and superstition is going by the board. It cannot stand the light of modern historical research which is beginning to cast suspicions everywhere upon modern conceptions of "progress." There is in consequence a movement back to fundamentals, to reconsider first principles, which promises to make the position of the medievalist impregnable. Everything that is vital in English thought today is medieval, and there is only one department of activity in modern life where medievalism has been defeated and that is in the architectural profession, which, a generation ago, abandoned its faith as an anachronism, in a vain effort to bring architecture into relation to the modern world. The paradox of the situation is that architects began to profess a belief in modernism only when modernism was beginning to disbelieve in itself.

The Fallacy of Adjustment

That, finally, is the key to the present situation. The profession is left floundering about like a rudderless ship, because in turning its back upon medievalism it cut itself off from its only possible intellectual base. Instead of the Renaissance policy bringing architecture into relation with the modern world, it has separated it entirely from the central current of modern thought and has pleased no one. For, while on the one hand the profession sacrificed the confidence of the more thoughtful and idealistic elements in society, who hitherto had acted as a link between the profession and the public, on the other hand it did not succeed in securing the confidence of commercial men, owing to the fact that as its accommodations were undertaken grudgingly they were felt by all at the time to be moral surrenders. Men who lose their idealism lose their driving force. Hence there can be no hope for the profession until it can recover those beliefs that the revival of the Renaissance destroyed. For the Renaissance movement was engineered by cynics, and has been followed by cynicism wherever it went. Its successes have been of the order of those facile half-successes that inevitably lead to a final and complete impotence—the prelude to dissolution and decay.

*"The Psychology of Peoples," by Gustave le Bon. P. 178.

Now the underlying cause of the moral failure of the profession is that when the Renaissance was advocated, the real facts of the situation were never faced. If the revival of medieval architecture* was being frustrated by economic difficulties, that was a reason for carrying our inquiries into the sphere of economics, not for changing the architectural faith. But the economic problem was shirked, with the result that when at length a crisis has been reached, the profession is mentally entirely unprepared—a conclusion that is borne in upon me by the fact that the discussion is almost entirely about adjustments and accommodation, for we no longer ask, as did the architect of the Gothic Revival, how we can conquer the world, but how we may accommodate ourselves to it. That is the Nemesis of shirking economics. If the failure were one of efficiency, as our accommodationists appear to argue, then it would follow that the most efficient architects would be the most successful and *vice versa*. We all know, as a matter of fact, that such is not the case, and that success in the profession has little to do with architectural or any kind of technical capacity. On the contrary, architects good, bad, and indifferent are to be found in every rank of the profession from the highest to the lowest. The explanation of this phenomenon is economic and psychological. It is due to the fact that as architecture in its essence is incompatible with industrialism, success in the profession is not related to any internal law of realities but to the operation of chance circumstances reacting upon the profession from without. It is because the architect as such speaks a different language to the modern man, and therefore is bound to the public by no common bond of sympathy and understanding, that social prestige exercises an influence in architecture to a degree I believe unknown in any other occupation. In other occupations success will bring social prestige, but in architecture social prestige must precede success, if not for every architect, at any rate for the more gifted members of the profession, for in their case the intellectual gulf between them and the public is wider than in the case of those of lesser gifts. With such men, if opportunities do not come to them early in life, the chances are they do not come at all, for as they grow older and more mature in thought, the intellectual gulf between them and the age tends to widen and to cause the public not to understand them. If such a man has been already successful, early, he will be accepted as a genius, but if not, he will be rejected as a crank by a public who entirely fail to understand the permanent disability under which the architect labors, compared with workers in other arts—that he must get clients before he can produce, while he has no means whatsoever of knowing who are the people that contemplate building, a fact that places the architect without social position at the mercy of circumstances to an extent entirely unappreciated by the average successful man of the world, and therefore tends, in the absence of any public recognition of this permanent disability, to deprive the unsuccessful architect of those opportunities which, if given him, would promote his success.

In former times this difficulty was recognized. It was understood that an architect could not succeed entirely off his own bat, and so it came about in Renaissance times that there were patrons who espoused the cause of particular architects and took a particular pride in the discovery of new men. But the simple truth of the matter that was so apparent in a simple state of society becomes obscured in a complex one like ours today. The public, seeing that A is successful and B is not, concludes that it must be because of some personal shortcoming of B, unaware of the fact that if A were placed in the circumstances of B he would be equally helpless. This does not occur to them because, in a complex society, cause and effect are much more difficult to trace. The simple truth that makes the world so unjust to B is further obscured by the existence of competitions which to the public appear to give every man his chance.

Architecture and the Guilds

Now all this stupidity, that places architects, whether successful or unsuccessful, very much at the mercy of ignorant opinion, is due finally to the fact that the profession is separated from its economic base in the building trades. A revival of patronage, if it could be effected, would be of considerable assistance to us in the period of transition, but it could not prove a final remedy. From whatever point of view I approach the subject, it comes finally to a return to the craft basis of architecture under a system of Guilds. We must work toward a return to the old conditions of building, when the architect was the master of the works and worked on his own job. Before the days of the Renaissance revival it was widely held among architects that a revival of architecture must follow a return to the medieval method of building, since until architecture recovers its base in experimental handicraft any new departure in architecture remains impossible. But though it has been recognized that a return to medieval methods would provide the conditions necessary for a solution of the esthetic problem in

*When I speak of medieval architecture I must be understood to refer, not only to the Romanesque, Byzantine, and Gothic, but to the vernacular architecture of the Renaissance in which the medieval spirit survives—in a word, to all European architecture that rests on a basis of experimental craftsmanship. On the contrary, when I speak of the Renaissance, I must be understood to refer exclusively to the architecture of the grand manner or monumental architecture, as some prefer to call it.

architecture, it has never been recognized that it would also provide a solution to the economic problem. Apart from such a policy, all I can see ahead is the complete annihilation both of architecture and the profession. Since, so long as the architectural profession seeks to perpetuate its existence as an independent unit, it can have no economic roots, and, having no economic roots, it must be finally crushed out of existence by those contiguous activities that have definite economic roots; thus all knowledge of architecture may disappear from the world as it did at the end of the eighteenth century, amid circumstances that will make its revival for some long time to come an entirely impossible proposition. But the situation might be saved by frankly facing the facts and removing the class barrier between architecture and the building trades, when, unless it so happens that modern society is precipitated into chaos (which is not unlikely), a ladder would be built whereby young architects could come to their own as a matter of course, and a foundation would be laid upon which architecture might revive. For under Building Trade Guilds the architect in his new function of Master Builder would become successful, not as at present by recommending himself to those who know nothing about architecture, but to those who do. This would operate to abolish that confusion of function which, as things are at present, frustrates all efforts towards reform, by enabling every man to find opportunities for doing the work for which his natural endowments most fit him. To those who hesitate to give their allegiance to such a policy and see difficulty in the way, I would say that those huge architectural monopolies that today appear to obstruct the path of all reform are nothing more than houses built on the sands, and must cease to exist as the economic conditions that created them tend to pass away. I would say, moreover, that what we lose in status as professional men we shall gain in personal independence. If history is to be trusted, the craftsman of the Middle Ages enjoyed a social standing far higher than the architect of today, as we gather from the story in the Mabinogion when Kilhwch was refused admittance to Arthur's hall by the porter who said: "The knife is in the meat, and the drink is in the horn, and there is revelry in Arthur's hall, and none may enter therein but the son of a King of a privileged country, and a craftsman bringing his craft."

(To be followed by II: "The Failure of the English Vernacular Revival.")

Post-War Committee—An American Opinion

Among the interesting communications received in response to the lengthy document recently distributed to the profession by the Post-War Committee, is a letter from Mr. John Taylor Boyd, Jr., of New York City. Mr. Boyd rightfully states in the first few paragraphs that the "Statement of Progress of the Post-War Committee" truly "is progress—a sound, comprehensive program of leadership pointing out the road for the profession to follow." It reminds us, however, that it is only a statement of progress in the matter of investigation and suggestion. It is a practical summary of a large and diversified opinion and the result of investigation and suggestion of many minds. It is now time to take steps to continue the investigations and suggestions in a more organized and systematic manner, and at the same time to begin a practical execution of the suggestions that will bring about improvements in the architectural profession. The Post-War Committee is now organized on that basis and all such thoughtful and constructive suggestions as that of Mr. Boyd are very helpful and will be gratefully received.

Mr. Boyd takes the proper attitude for all architects to assume in this great work when he says he hopes to contribute what he can and immediately offers comments, some of which have been already offered by others, some of which, however, are new or expressed from a new point of view, and these bear upon such an important portion of the work of the Post-War Committee that the publication of a digest of them would be desirable.

We cannot quite agree with Mr. Boyd that the Post-War Committee has reached a solution of matters under the headings of "Professional Principle," "Work of Post-War Committee" and "Architect as a Citizen," as set forth in the "Statement of Progress," notwithstanding, as he says "gigantic forces now let loose upon the world make it impossible to find a basis for a program that reaches many years ahead," for it must be presumed that an intensive study of these problems by more of the architects of the nation, as they may be represented in the new organization of the Post-War Committee, will bring out continually and progressively new and better solutions of these problems.

Education

Mr. Boyd discusses two points of prime importance in the program of the Post-War Committee,

namely, education and the initiation of the young architect into the profession. Mr. Boyd says that, "Notwithstanding the excellent program of the Illinois Chapter and the memorandum of Mr. Magonigle," brought out at the 51st Annual Convention, "we should not lose the breadth, imagination, and sympathy of the Beaux-Arts idea. Anglo-Saxon education has one great difference from other systems, a difference which is both its strongest and weakest feature. It has an ecclesiastical heritage and insists on character as well as mind, but in developing character in its closely knit community life it too often becomes formal, pedantic, authoritarian. We should know how to force discipline without the drill-sergeant.

"In education, culture is always essential. But we should discriminate as to what kind of culture is wanted. We should not be misled by the ideal of charming manners, social prestige, and wide reading, for too many men have been carried so far by this seductive vision that they have gotten even further out of touch with the hustling American world than their rôle of expert and specialist would naturally take them. Culture should be democratic and not aristocratic. All the professions are beginning to see that the long, formal, carefully shepherded course of education in the schools and of technical training afterwards has dangers of producing a race of one-sided experts and specialists who see every problem through the eye-glasses of their own profession, and who find it so difficult, with the best possible good will, to coöperate with the outside world. The business men complain that the expert must always be 100 per cent sure, must always 'cover' himself, and that he finds it so difficult to appreciate the modern idea of compromise and coördination. The expert's ideal is a fine one, but it should not be made a fetish. In the formal, intense, community atmosphere of an architectural school, both teacher and student, in spite of themselves, fall under the insidious exaggeration of the specialist's viewpoint.

The Young Architect

Perhaps the most important consideration for the improvement of the architectural profession, and, also, the one that has been given the least constructive attention on the part of the profession, is how the young architect is to get a start in the profession and at the same time earn a modest living. For the serious situation now existent, Mr. Boyd says:

"There are two remedies: One is pessimistic, destructive, assumes that the profession is overcrowded, that its membership should be reduced to a point which allows those remaining to earn that living which even a professional man should have. This solution leaves architecture as a luxury. The other is that the profession contains only several thousand men in the whole country; that it needs the combined energy and brains of all of them if the profession is to progress further in its rôle as an essential factor in American civilization. It declares that the field of activity should be vastly broadened; that it has never been sufficiently developed; that such broadening will come not by stimulating the commercial activity of individuals but by the greater coöperation of the profession as a whole, on a professional basis, with the American democracy. A program and organization should be developed along this line. Further, I think we should have a clearer idea of what the 'young architect' is. Someone always arises (is it the same person?) and remarks patronizingly of the danger to the profession caused by the 'young architect' who gets his experience at the expense of his clients; how 'only the established architect, with large organization and long experience should be called upon.' Now, is an architect to become a middle-aged man before he dares tackle small country houses or alterations? Hardly—he should be able to handle these problems proficiently in three or five years after graduation. This small work is about all that the average architect ever gets, anyway, and he should be at it, under his own name, at the age of thirty, making a fair income. With experience and ability above the average he should be able to tackle successfully all but the very big work at the age of thirty-five.

"Throughout all this education and professional training [of the young architect] his path has been made as smooth for him as possible—each step carefully prepared for him, encouraging him to progress as fast as he is able, until, at the age of thirty, he is fully equipped professionally to begin a modest practice. Yet he must take his final step, the one on which his whole career depends, almost without aid or without any experience. He may be already known in his own profession, yet he can hardly be known outside of it, and he can hardly offer prospective clients any tangible evidence of his ability. He must be entrusted with the expense of several thousand dollars at least. Thus, as a result, the young architect finds himself alone in the industrial world in a competition of 'business-getting' and of salesmanship against established powerful organizations, must sink or swim on his ability to suddenly develop qualities within himself which he had never been greatly encouraged even to consider. After a long training in the purely professional field he finds that his success depends at first on considerations that are not considered professional at all.

"Some means of aiding the young architect in his final venture should be found, else the profession will train up numbers of youths, only to have them snapped up by business, which is now more than

ever seeking well-trained, responsible young men, wherever it may find them. I believe that the profession should organize to solve this difficulty. Solve it in such a way that the capable youth who chooses architecture as a life-work should be reasonably sure of the same income from the years of thirty to thirty-five that is asked for teachers in the university endowment campaigns."

"With the immense expansion that technical scientific progress makes possible in this age, the demand for educated, responsible young men will run far ahead of the supply. The professions will be forced to compete with industry for the youth of the country. They cannot offer the financial rewards of business; they must substitute other values for material ones. But I believe they will be compelled to work out a system by which a youth may be reasonably sure of a living in independent practice. This need lays a great burden upon the initiative of the profession as a whole."

HENRY K. HOLSMAN,
Secretary Post-War Committee.

Protection of Historic Buildings

By HORACE WELLS SELLERS

THOSE who have read Baring Gould's sketches of "An Old English Home" may recall his chapter relating to the parish church in which he deplores the injury so many of the ancient buildings have suffered in the hands of the so-called "restorers." Many of these structures, he reminds us, were built of local materials and decorated by the inhabitants of the parish, who left in their handicraft something of their very best, only to be replaced in modern times by stuff manufactured at a distance and too often chosen from an illustrated catalogue. "Some wiseacres" he adds, "cry out because antiquaries complain at this devastation, but have not these latter a right to complain when parochial history written into the parish church is being obliterated?"

It is reassuring to know that these sentiments became sufficiently widespread in England to crystallize into a permanent organization entitled the "Society for the Protection of Ancient Buildings," founded in 1877. In the current annual report of this Society its purpose is set forth in its plea to put Protection in place of Restoration, in dealing with ancient structures of historic and architectural interest, and, while staving off decay, to resist the temptation to tamper with either the fabric or its ornament; "in fine to treat our ancient buildings as monuments of a bygone art, created by bygone manners, that modern art cannot meddle with without destroying."

The report calls attention to the fact that each change made during the early history of these ancient structures reflects truthfully the fashion of the time, and that imitation or forgery was impossible in the era of medieval art, while today the civilized world, amidst its knowledge of the styles of the past, has no style of its own in the same sense that the architecture of the Middle Ages was alive with the spirit of the times in which it was fashioned.

While this is true of the more ancient monuments of the Old World, the same plea cannot apply without qualification to the architecture of later times, and especially of the seventeenth and eighteenth centuries to which our early American buildings belong, and which we would see restored to their original condition. We are only too familiar with the changes wrought in our early architecture during the nineteenth century, after the breaking away from the principles of design that governed the work of our master builders during the colonial period, and we have not, therefore, the same occasion to deplore the destruction of modern details where changes made in the nineteenth century are in the way of the restoration of an ancient building.

We can, however, join with our English kinsmen in the support of the general principles of preservation rather than attempted restoration where the craftsmanship of the Middle Ages is concerned, in the desire to safeguard what James Russell Lowell in writing of our relations to the mother country describes as "its heirlooms of immemorial culture, its historic monuments, ours no less than theirs."

The report before us contains photographs of interesting buildings, representing cases the Society has had to deal with as a general indication of the work accomplished during the preceding year. It points out that even where a structure has come into private hands, and it is threatened with changes to adapt it to the owner's needs, the Society has been successful in having the work done under the supervision of an experienced architect in sympathy with the Society's ideals.

Included in the report is a paper read by Prof. S. D. Adshead, F. R. I. B. A., dealing with "Old Villages and Village Reconstruction," in which is traced the growth of the early English communities. In presenting his plea for their protection he quotes William Morris, who, in addressing a group of young

architects, said that "at one time any village could boast of a decent little chap who knew something of building, who could put up a decent little home for a decent little man to live in, but now it takes a highly skilled architect to draw up plans and arrange technicalities."

Professor Adshead, in considering the ancient villages of England, holds that "he who can carelessly destroy the works of those who have long since ceased to toil is surely lacking in a sense of reverence and respect," and while we on this side of the Atlantic may not go quite as far as this, especially when we view the towns that are the product of the period of our greatest industrial growth, we can sympathize with the Professor's point of view in the face of the changes being wrought by foreign immigration in the case of some of the ancient villages of New England.

We can agree with him also in his suggestion that instead of improving and enlarging the picturesque old villages by crowding in new structures among the old, the "policy should be to create new villages entirely separate, but close to the original settlement, just as Brighton and Hastings are not extensions or enlargements of the old fishing villages."

The activities of this English society in its special field are similar to those of our "Society for the Preservation of New England Antiquities," and, in this age of shifting change in our older communities, there is increasing need of agencies to safeguard the landmarks in the keeping of this generation and which should be the heritage of those who come after us.

Instruction in Architecture in the A. E. F. Art Training Center at Bellevue, Seine-et-Oise, France

By GEORGE HERBERT GRAY
Formerly Major of Engineers and Commandant of the School

I. The General Organization for Teaching Art in the A. E. F.

THE army to try the teaching of art! The idea was ridiculed when first proposed; and even when the organization was under way, one of the army officers identified with the general organization told me he considered it the most absurd undertaking of which he had ever heard. Nevertheless, after the signing of the Armistice, and pending the return of the troops to America, there were a number of schools for teaching art organized for the officers and men of the Army who were disposed to take advantage of such courses. The work of these schools was unprecedented, far-reaching, and so suggestive of new ideas and methods of study that much is being written on the subject. It may, therefore, be wise to indicate the manner in which these several schools were correlated.

First of all, at the great concentration area at Le Mans, where tens of thousands of troops were held in readiness to move on to the port of embarkation, Ernest Coxhead* formed a large class for the study of architectural monuments in that region. Simultaneously, there was in process of organization, a comprehensive plan for study in all the fields of art, open to all troops in the A. E. F. who were not tied down to definite army work. The plan adopted was the formation of two schools. One for those who had the maximum amount of previous training, to be located at Bellevue on the outskirts of Paris; the other for those with less training, to be located at Beaune, as a college of the great A. E. F. University. Technically, the University at Beaune comprehended all army educational work in the A. E. F.

The transforming of buildings into study- and lecture-halls; the collecting of books and materials for drawing, painting, etching, engraving, and modeling, of clothing, bedding and kitchen equipment; the preparation of curricula and the assembling of instructors was the work of weeks. Meantime, students were arriving at the headquarters in Paris. Some had been students there at the outbreak of the war. They were keen to return to their former masters and were allowed this privilege; a few others were sent to existing French schools in Paris and elsewhere. For those convalescent in the hospitals, a special department was formed under Capt. Aymar Embury. This, in a general way, is the manner in which the field of art was covered.

The entire Department of Fine Arts was under the direction of George S. Helman, assisted by Lloyd Warren in charge of architecture, painting and sculpture, and by Grosvenor Atterbury in charge of architectural engineering and construction, city planning, and landscape architecture. Mr. Warren outlined the curricula for his subject at Bellevue and Beaune, and, in like manner, Mr. Atterbury for his; the landscape work and city planning, as contemplated, were to be taught at Beaune only (except that extensive propaganda work was to be done).

*Mr. Coxhead's work is described in the Journal for October and November, 1919.

As Mr. Atterbury was called to America about the time work began, the landscape courses did not materialize; students for such courses were assigned to architectural design or entered at the French Horticultural Schools, as at Versailles. The city-planning work was diverted to Bellevue and organized and directed by the writer. Questionnaires were issued throughout the army to determine what students were available for the work and what their qualifications might be.

II. The Work at Bellevue

The Equipment: Mr. Warren had hopes of getting the Pavillon de Bellevue as our locus, but before plans could be carried out or even defined, it was essential definitely to secure these quarters. I immediately obtained an option on the property, and, having been appointed to the military command of the post, proceeded to transform and equip it for living and teaching purposes and to get in abundant supplies of all necessary materials—although formal military authority for occupancy was not forthcoming until shortly before school closed. The school at Beaune had to transform an old army hospital, consisting of portable wooden shacks. For this and other reasons it happened that the school at Bellevue was under way some time before that at Beaune, and all the first students were ordered to Bellevue where they were either retained or booked for Beaune, as their qualifications might require—a limited number, especially so desiring, being assigned to the Ateliers of Paris.

The Opportunity: Out in the mud and the dreary monotony of the routine of camp-life there were, it was estimated, upward of two thousand soldiers of various grades and ranks, eager to learn something of the land in which they found themselves at the end of the fighting—a land which I have elsewhere described as "a veritable treasure-house of art of every description, whose whole history is interlaced with the history of art; a land which for ages has been producing masters and master works; a land replete with museums, schools, and instructors of great gift."* When word came that we were to be authorized to take advantage of these opportunities, the news was electrifying—almost unthinkable. Thus it was that those who came to the school were imbued with an enthusiasm and zeal probably never before equaled by a body of students, and back of this was a physical fitness and energy certainly never before equaled by a body of *art* students. How was the course of study conceived to take advantage of this extraordinary coincidence of zealous students and rare opportunities? Mr. Warren, who was Dean of the Faculty at Bellevue and in full charge of instruction, stated the answer very clearly: "In view of the short duration of the proposed term of study (three months) and of our proximity to the center of all French art activities, it was thought best to make some sacrifice of the students' time, usually devoted in art schools entirely to technical work, for the benefit of a general knowledge of the many forms of art in which France was eminent. Therefore, it was arranged that all the students should visit the museums and places of general artistic interest in Paris and its vicinity, including chateaux, museums, and expositions, emphasizing for each group those elements which had a peculiar and particular interest for the group. In short, the three-months' course was to be the study of the fine and applied arts of France, with specialization in their various branches, rather than a study of the world's art or merely of technique, such as is conducted in academies in general. The study of the French language was a corollary to this proposition, and, it was evident, must be included."

Methods and Results: Without going into the details of the curriculum, which are recorded at greater length in the report which has just been quoted, there are certain characteristics of the work of which the results warrant emphasis. First of all, and of a general character, was the fact that housed under one and the same roof, eating and living side by side, were painters, sculptors, interior decorators, and architects, comparing notes and each interested in the other's problems. In like manner, many of the instructors lived under this same roof and hobnobbed with the students.

Then there was the breadth of the curriculum, beginning with classes in French in the morning, followed by courses in the history of France by M. Emile Seillens, in which emphasis was laid on French national traits and the causes out of which developed those great epochs in French history which produced distinctive styles and periods of architecture. Following these were lectures in special branches of art, sculpture, painting, interior decoration, architecture, and certain lectures on landscape gardening and city planning, attended by all the students regardless of the department in which they were enrolled. In general, these lectures were copiously illustrated. But there was another way of taking out of the realm of the abstract the knowledge thus acquired. This was a study of the works of art themselves, the monuments, and the collections in the museums.

Two means were organized to accomplish this end, the first and most comprehensive being a series of "Study Trips," systematic visits to the museums and monuments of Paris. Every Monday night an illustrated lecture and critique was given us by William C. Titcomb, covering that part of the city

*"Report in the A. E. F. Art Training Center at Bellevue, Seine-et-Oise, March–June, 1919," Geo. H. Gray, Maj. Eng.

which the students were to visit during the ensuing week. Each afternoon thereafter a group of some sixty students was taken to Paris in our army trucks, fitted with benches for the purpose, and was conducted by Mr. Titcomb to the section of the city covered by his last lecture. Thus, by the end of the week, the entire student body, some three hundred, had been over the ground. The second means consisted of visits to places of peculiar interest to the special departments, conducted by the department heads, often following in greater detail one of the "Study Trips."

In the afternoons of four days of the week the students worked on their problems of design, which in the early part of the work were test sketches to determine the experience and facility of the student and to aid in placing him in his proper class. Those having the necessary experience were allowed to take up the current Beaux-Arts problems, while the less experienced were especially coached on problems more elementary. As the Beaux-Arts problems are usually arranged to tie up modern requirements with the best traditions and heritage of the past, these problems also usually led to the study of certain existing monuments.

In order to give the student opportunity to study these monuments, which lie beyond the immediate district of Paris, orders were issued for travel leave from Saturday noon to midnight Sunday. This enabled them to see places as far distant as Chartres on the one side and Fontainebleau on the other. After this field was pretty well studied, the time was extended so that the leave began on Friday and continued until Sunday night.

Each day was a full one. In that portion of the morning not taken up with French classes and general lectures there were several special classes. One very important one was a course in pencil-sketching conducted by Lieut. Philip L. Small, who insisted that the student place his subject properly on the paper by beginning with the salient points and the essential connecting lines, later developing the details and values; as a result, the student was soon able to record his observation in a quick sketch of a few lines or in a more detailed study if the time were valuable. This facility also enabled the student to work more rapidly in the draughting-room. It was a notably successful course. Good work was also accomplished by a more limited number in water-color work, under the guidance of Ensign Brown and Lieut. F. Nelson Breed.

Likewise, in the morning, came the lectures on city-planning, attended by those classed as advanced architects; a number were landscape architects. The lectures were given by George B. Ford, Cyrus W. Thomas, Lieut. Francis A. Robinson, and myself. The method pursued was to give a general view of the subject of city-planning, showing its relation to the arts, to engineering, and to the economic and political development of the city as a whole. This general view of the subject was followed by a study of the many object lessons found in the city of Paris and a history of their original development. The students were required to measure and sketch a variety of interesting parts of the city. The courses culminated in a demonstration lecture by Capt. Clarence E. Howard, who took the program for the reconstruction of the region of Chauny, and, from the data given in the program and on the accompanying maps, developed a series of diagrams leading to his project. It will be seen that in this course, as in all other work, the students were being trained in observation, for it was always contemplated that extensive travel should follow for the students who should have satisfactorily completed the course at the school.

The study trips to Paris took one afternoon each week and the week-end travel two more, leaving four afternoons for the atelier work. Usually there were present for this period upward of a hundred students. To give personal instruction and criticism to such a number as this, Ensign Brown, Mr. Warren's assistant as head of the Department of Architecture, gave his entire time to the work, and on certain afternoons of the week M. Jean-Paul Alaux and M. Jacques Carlu each criticized half of the class. At longer intervals M. Victor Laloux also helped. In his first visit he criticized 115 "projects" and came out with his face glowing with enthusiasm over the undertaking.

After the lectures and "projects" had proceeded to the point where the student had a certain facility in technique and a better appreciation of form and proportion, together with a certain knowledge of the periods, classes were organized for making careful measured drawings of historic monuments, different students taking various portions of the same monument.

That the course was broadly conceived will be better appreciated when it is borne in mind that the lectures given to all the students were by specialists in their several lines: Lorado Taft, Capt. Ernest Piexotto, Leslie Caldwell, John Galen Howard, A. Kingsley Porter, among the American lecturers, and, among the French lecturers, M. Louis Dimier, M. J. C. N. Forrestier, M. Adolph Giraldon, M. Solomon Reinach, M. Marquet de Vasselot, and many others. But so well coördinated were the various subjects that each additional course made for thoroughness rather than shallowness. Solon Borglum lived at the school and mingled with the students of sculpture and architecture alike.

The analysis of the personnel of the student bodies is interesting, to wit:

Students assigned from March 5 to June 1

	Total	Commissioned Officers	Non-commissioned Officers	Privates
Architects	160	57	67	36
Painters	131	14	52	65
Sculptors	16		6	10
Interior Decorators	37	1	25	11
Unassigned	6	3	2	1
Grand total	350	75	152	123

Orders were issued that while in classes there should be no distinction between officers and the enlisted men, but at all other times the usual distinctions were made, the officers being quartered in separate rooms from the men and maintaining their separate mess.

So we lived for several months "as a great happy family," as Mr. Taft put it, each hammering away at the work of his choice. In May came the announcement that all schools were to close the latter part of June and the students to be prepared for embarkation. Then there came the impatience to get out and see the more distant parts of France. To accomplish this we decided to close all regular courses on the last of May, so that before closing the school on June 15 there would be for all, as part of their school work, two solid weeks for distant traveling. An additional two weeks' furlough was available, after that, for a large number.

If we take as the real estimate of the success of a course the progress shown by the individual student, this three-months' course was, I should say, equivalent to six or eight months work under ordinary conditions. An exhibit of the work of this and other schools of the A. E. F. is under consideration—an exhibit to travel over the entire country.

Permanent Results: May we not create in peace times such a school as this, where the arts are studied together, all following certain common courses and discussing their special problems together? I feel that we can, and in more ways than one.

(*a*) First, and most closely allied to the work just described, it is hoped that the country is finally awake to the necessity of universal military training as a safeguard to the nation as a whole, and as a means for the conservation of the lives of our youth in event of war, saving the needless slaughter that falls to the lot of untrained troops. In such a scheme, with three months' strictly military training and another three months of vocational training, one or more large groups of art students could be assembled in such centers as are endowed with art collections and notable buildings. As there was an interchange of lecturers between Bellevue and Beaune, so might there be in the scheme which is here proposed.

(*b*) It would seem that some of our colleges, located near our great art collections and having as a nucleus certain courses in the fine arts, could expand to include the other branches, or coöperate with other existing schools in such a manner as to bring the students into a common life and close contact.

(*c*) Schools all over the country could combine to form a summer school for foreign study and travel, with headquarters in or near Paris, where there might be conducted a three-months' course of the kind described in this article, a larger amount of travel being granted to the more advanced students than to those less advanced. It is a gratifying fact that already steps have been taken by one of our largest schools of architecture to put this plan into operation. They now lack for scholarships.

(*d*) This school might well be the nucleus of an American Academy at Paris, corresponding to the American Academy at Rome and at Athens. There is much that such an institution could do to supplement the work of the existing schools at Paris. This was abundantly demonstrated by the fact that the work of the students temporarily in the Paris ateliers did not compare with that of the students at Bellevue, although none of their time was taken up with systematic courses of lectures and travel. This can be attributed to the very fact that they did not have these courses to throw the necessary light on the traditions which the Ecole de Beaux-Arts presumes each student shall have in some degree before entering the school, and which he studies systematically during his course. The French were most enthusiastic over our work. They coöperated most heartily and expressed the hope that out of it might come something permanent.

It is not necessary here to expand on the direct advantage to the army itself of men trained in quick and accurate freehand sketching, in architectural drawing, and in approaching any problem in that frame of mind which quickly grasps the essential and gives consideration to details in their proper proportions. Nor, is it here necessary to more than call attention to the fact that the army is the only organization which in a large way has ever seen to it that young men of the voting age shall have a working knowledge of the English language, some knowledge of the traditions of the country, and other such matters essential to good citizenship.

Let us hope that the Institute will take the lead by endorsing some or all of the educational schemes here suggested.

PLACE DE LA BASTILE
Drawn and lithographed by Ph. Benoist. Figures by Bayot

The Plan of Paris. II

TRANSFORMATIONS AFFECTING THE CENTRAL QUARTERS. ESTHETIC PROBLEMS CONNECTED WITH THESE OPERATIONS

By NILS HAMMARSTRAND

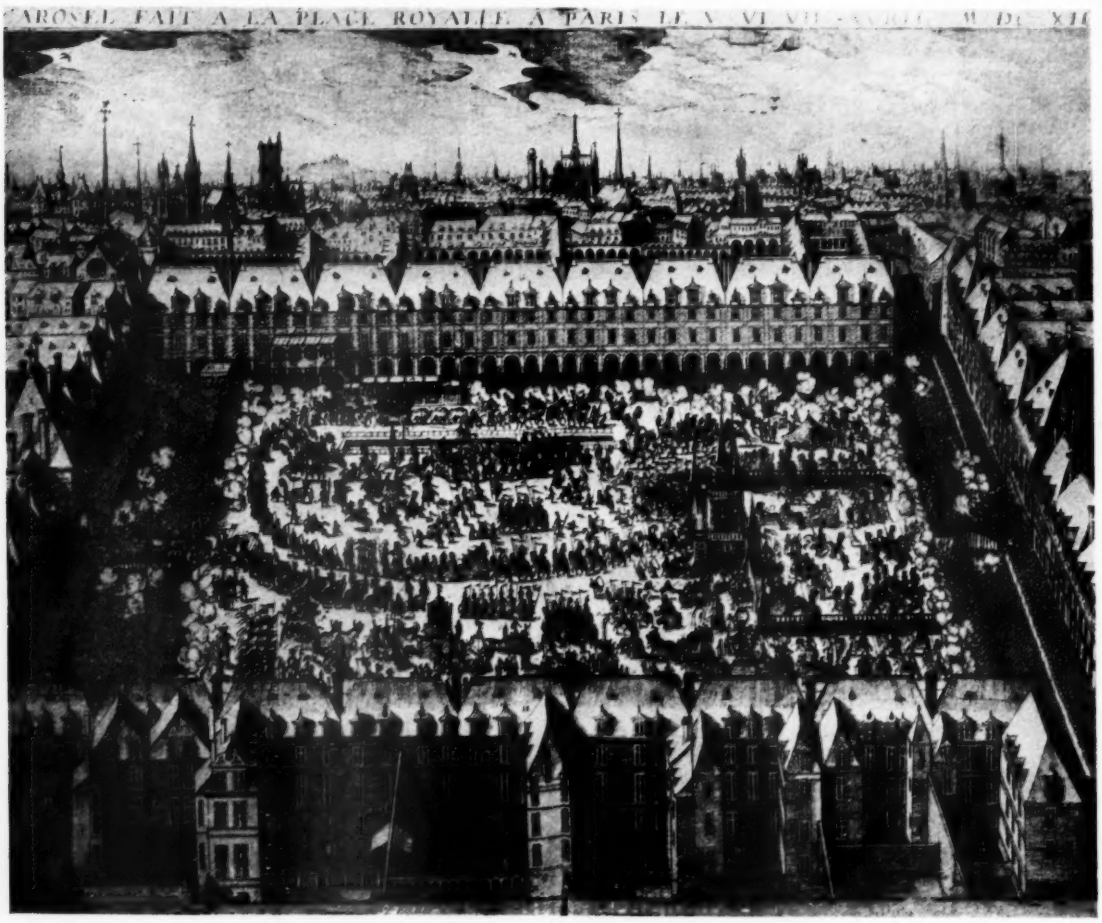
The Traffic Problem

TO improve the local means of conveyance—always greatly neglected in Paris until recent years—much has been done since the beginning of this century. In constructing a widely ramified system of subways, a serious endeavor has been made to counteract the growing necessity of regulating and facilitating traffic by new extensive measures of replanning, an effort which hitherto had been deemed futile. Respecting the effects produced by the new means of transportation, it is recognized that they have favored a migratory movement of decentralization. On the other hand, they have in Paris, as everywhere else where introduced, failed to bring any relief to the congestion of traffic on the surface and have rather served as a stimulus to increasing traffic generally.

Congestion not Cured by Rapid Transit

The universal recognition that methods of rapid transit, far from relieving traffic pressure, rather act as an agency for multiplying circulation, will, of course, prove especially fatal in a city like Paris, which is not only very populous but also still extensively medieval as to its physical construction. In view of the local conditions, there is nothing astonishing or condemnable in the fact that the authorities of the city have found it expedient to resort to a new comprehensive revision of the street system. The underground connections between the accentric railway termini have not proved efficacious in relieving the center of the city. Evidently the transformative work, begun about 1800 and continued on a larger scale since about 1850, has not been sufficient. Thus experience has proved that a more central position of the great railway termini, though otherwise advantageous, would not have lessened the urgency of the great operations performed during the later half of the last century.

The work of Haussmann was, as generally known, attacked not only for being carried out on too large a scale, in the opinion of its critics, but also for being executed in a wrong manner. The best way in which to effect the needed improvements generally, according to his opponents, would have been to widen old arteries instead of



THE ANCIENT PLACE ROYALE (1612)—NOW THE PLACE DES VOSGES
After an early engraving. By courtesy of George Herbert Gray, A. I. A.

opening up new ones. While Thiers, one of the leaders of the opposition, acknowledged the merits of the so-called "first net," he more or less unreservedly condemned the rest, i. e., the bulk of the operations.

To exemplify, Thiers did not approve such important measures as the opening up of the Avenue de l'Opéra and of the Rue de Turbigo. "The Rue de Turbigo is certainly not useless, but it would have been better to widen the Rue Montmartre," he said.

Modifications vs. Transformations

Thiers and his adherents certainly underestimated the future value of the Avenue de l'Opéra and of the Rue de Turbigo. But, if they could have an opportunity to view the situation today, they would have the satisfaction of being able to state that the method cherished by them has been adopted and is being more extensively applied in carrying out the new operations. A considerable number of new streets has been planned, but the street widenings proposed seem to be even more numerous. Thus, while the general effect of the improvements realized by Haussmann was a transformation in the true sense of the word, the new campaign will rather modify than transform the city structure. In the "Considérations Techniques Préliminaires," published by the Commission d'extension de Paris, some reasons are given for adopting this policy. In emphasizing that the streets, especially in the center, already now divide the city more than is desirable, the commission says that "the danger arising from an excessive unnecessary multiplication of the streets is the exaggerated reduction of the size of the blocks, and, in consequence thereof, the suppression of great interior courtyards and private gardens." This applies especially to certain quarters of the city, as, for instance, the Quartier St. Germain, where the opening up of one or two great arteries "would inevitably result in the rapid disappearance of most of the great gardens still subsisting between the Rue de Babylone, the Rue de Varenne, and the Rue de Grenelle, amidst very extensive blocks."*

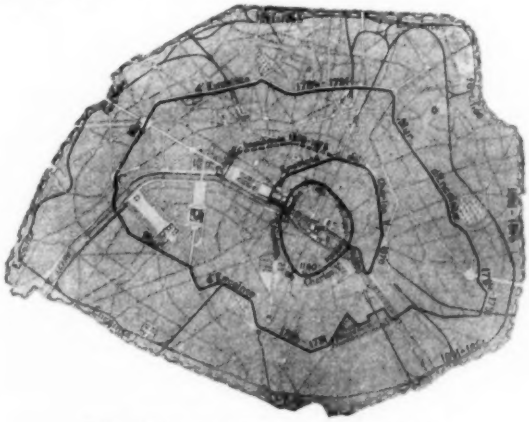
*Commission d'extension de Paris: Considérations Techniques Préliminaires, p. 56. Published by the Préfecture du Department de la Seine.

Radial Traffic Arteries

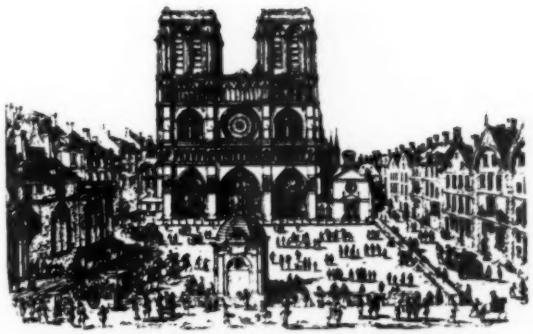
In making this statement, the Committee on the Extension of Paris has evidently had in mind the suggestions by the architect Eugène Hénard aiming at the creation of a central *perimètre de rayonnement* from which broad arteries should radiate in all directions. By a comparative study of the city plans of Berlin, London, Moscow, and Paris, Hénard arrived at the conclusion that on the one hand, the present *perimètre de rayonnement* of Paris, formed, according to Hénard, by the great inner boulevards on the north and the Boulevard St. Germain on the south, is too extensive, and that, on the other hand, the number of radiating arteries is insufficient. He therefore proposed to combine new and existing, but very much widened, arteries into a system of two north to south and two east to west magistral lines of communication supplemented by diagonal avenues radiating from the points of intersection. In this way a central traffic circuit, from which thoroughfares should radiate in all directions, would have been formed.*

The tendency to further a centralization of traffic inherent to this system has not found sympathy with the committee on the extension of Paris, which thus expresses its opinion: "It has been proposed to create a less extensive perimeter of radiation. It would scarcely suit a city, the expansive force of which is so great and which, perhaps, in a century will have quintupled its area. And where create this little *perimètre de rayonnement?* A very elastic question, because the center of Paris is not fixed. It is, in reality, the Place des Vosges under Henry IV, the Palais Royal during the Revolution, the Place de l'Opéra yesterday, today the Rue Royale. The street system can certainly be improved, but one must not think that it is thoroughly bad and that it ought to be remade from top to bottom. Besides, in this matter the too simple formulas are vain and dangerous. The improvement of the street plan of Paris does not consist in finding a center or a perimeter of radiation, in duplicating the main *croisée*, or in creating four great radiating arteries. Such a plan, while too symmetrical, either does not answer exact needs, or is not to be realized in some parts, or is already realized in others. Paris exists, and, in order to solve the problem, it is perhaps as proper to observe as to reason."*

*Eugène Hénard: Etudes sur les transformations de Paris. La Percée du Palais Royal. La nouvelle grande croisée de Paris. 1904. La circulation dans les villes modernes. L'automobilisme et les voies rayonnantes de Paris. 1905.



THE WALLS OF PARIS FROM 1180 TO 1845



PARVIS DE NOTRE DAME—XVIITH CENTURY
By courtesy of George H. Gray, Esq.

All the arguments thus put forth by Hénard's critics are not equally happy, but, in the main, they testify to a sensible recognition of the fact that Hénard's projects suffer from having been evolved too much in the abstract. Aside from the circumstance that his theoretical reasonings, which certainly do not lack merit, seem to have been extensively based on an insufficient knowledge of the actual conditions in the various localities, it remains to be stated that his conclusions typify those not too uncommon attempts at theoretical generalization, the practical value of which, in this special field, seems particularly dubious. The peculiarity of local conditions and the intricacy of the problems involved are apt to cause a failure when the theoretical scheme is applied to practical diversified cases. On principle it may well be maintained that in replanning a city no other general method is appropriate to apply than the closest possible adaptation to the local conditions and the local needs, as far as they can be ascertained, for the present, and estimated to some extent for the future.

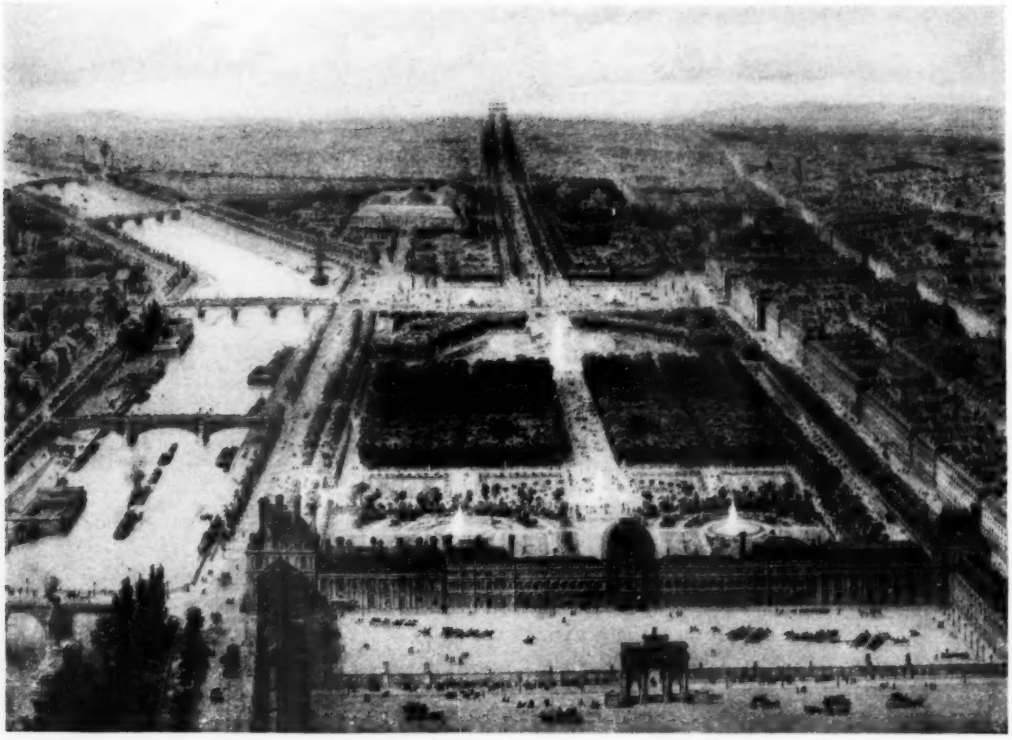
Shifting Centers of Congestion

In regard to Paris and its "center" the committee on the extension of the city hints at the fact that the greatest concentration of traffic nowadays is to be found in another region than was the case thirty, fifty, or more years ago. The committee helps us to appreciate this fact by communicating some pertinent figures. The average number of vehicles circulating between three and seven o'clock in the evening, the time of greatest intensity of traffic, during a period of seven days at the following points was:

	1881	1912
At the Crossing, Rue de Rivoli and Boulevard Sebastopol	4.702	6.097
At the Crossing, Boulevard des Italiens and Rue de Richelieu	3.829	7.327
In Avenue des Champs Elysées (at the Place de la Concorde)	1.435	11.634
At the Crossing, Rue Royale and Rue St. Honoré	2.117	12.222

Thus, in 1881 the crossing of the Boulevard Sebastopol and the Rue de Rivoli was the most frequented of these four points, the crossing of the Rue de Richelieu and the Boulevard des Italiens being second. In 1912 the order is entirely reversed, the more westerly localities of the Rue Royale and

*Considérations Techniques Préliminaires, pp. 53, 54.



PALACE AND GARDENS OF THE TUILERIES.—BIRD'S-EYE VIEW FROM ABOVE THE PLACE DU CARROUSEL
Drawn by Felix Benoist. Lithographed by J. Arnout. Figures by A. Bayot

the Avenue des Champs Elysées showing a much greater frequency. Nowadays, the high tide of traffic in Paris is to be found in the Place de l'Opéra, the Avenue de l'Opéra, and the adjoining boulevards, in the Rue Royale, the western section of the Rue de Rivoli, the Place de la Concorde, and the Avenue des Champs Elysées. The neighborhood of the Opera and of the Place de la Concorde is now the great traffic center of the capital.

Traffic Currents

It has been observed that the traffic congestion in these most frequented of the streets of Paris is not much less than or equal to that prevailing in the most crowded, but generally narrower, thoroughfares of London. Considering the difference in size between the two cities, this may seem somewhat puzzling. But does not the explanation lie in the better regulation and direction of the London traffic currents? However, the serious endeavors which have been made in Paris in recent years, with a view to bringing some order and system out of the chaos of circulation, should be recognized. If they have been less successful than corresponding measures in London, it may, in some degree, depend on a difference of the national temperament north and south of the Channel. In formulating the new regulations, which the widespread use of the automobile has especially necessitated, the authorities have duly considered various suggestions made by Mr. Hénard in his meritorious studies on this matter.

The difficulties under which the circulation in Paris has labored for years have also been an invitation more closely to scrutinize the transformations achieved during the last century as to their value from this viewpoint. To begin with then, it may be remarked that an enterprise such as these unparalleled transformations represent would have been more than miraculous if its results had deserved the unbounded praise of which they sometimes have been the subject. On the other hand, the adverse criticism bestowed on this work has often been one-sided and unfair. It seems just that achievements of the past should be judged, not only according to the standards of the present, but also with due consideration of the different circumstances under which they were accomplished, as far as these can be estimated. In regard to the transformation of Paris, it should be remembered that this gigantic remoulding of an old city was started at a time when the railways, our chief means of rapid transit, still were in their first stage of development. Projects for extensive local railway nets as a medium to relieving congestion were nowhere anything more than matters of discussion. It was only while these operations were in progress that such schemes began to mature, and, though the idea underlying them was less readily adopted and realized in France than in some other quarters, yet it may be maintained that this idea everywhere has been rather slow in progressing toward some practical realization, only making headway the more rap-

JARDIN DES PLANTES.—BIRD'S-EYE VIEW
Drawn by Felix Benoist. Lithographed by Jacottet and Aubrum

idly after the resisting barriers of that fundamental human instinct, conservatism, had been broken.

Haussmann and Napoleon III

How great was the need for a radical improvement of the street system of Paris, about the middle of the last century, anterior to the introduction of tramways, local elevated railroads, and subways, is not easy to estimate. Except the boulevards, the Rue Royale, the finished part of the Rue de Rivoli, the Rue de la Paix, the Rue Castiglione, and one or two more streets, there was not a thoroughfare in Paris, the width of which exceeded 16 or 17 yards, while the city counted more than a million inhabitants. "Paris of the time of Louis Philippe," says Victorien Sardou, "was only slightly different from Paris of the Revolution and of the First Empire," the author then evidently having in view the central parts of the city where the conditions had not been considerably changed through the transformations planned during the Revolution and later effected in part, chiefly during the Consulate and the First Empire. These transformations represented an effort which lost its impetus when Napoleon I had to recede; plans evolved by the Seine prefect Chabrol during the Restoration did not materialize, and the operations achieved during this period and during the July monarchy were quite inadequate to the needs. Thus Napoleon III and Haussmann had to make good the neglect or inability of preceding administrations. While this circumstance primarily accounts for the vast scope of the plans, it also sufficiently explains the rapidity of action characteristic of their execution. Of course, the political opponents of Haussmann and the Empire, and their temporary followers, preferred to regard the whole enterprise chiefly as a political affair, initiated less with public welfare in view than with the object of facilitating the movement and action of troops in the event of an uprising, and of securing to the capital a dazzling splendor of appearance. Certainly, these opinions, upheld also by some contemporary writers on the city plan of Paris, do not render justice to the motives; they attach too great an importance to some while depreciating the actual weight of others.

The Railway Problem

In formulating an opinion respecting the merits and demerits of a street system, from the viewpoint of circulation, it should be borne in mind that the traffic problem of great cities, generally seen, can not be reduced to the simple formula of a question regarding the relative importance of railroads and streets as traffic carriers. Even exceptionally good local railroad connections do not, according to experience, constitute a remedy against the evil effects of a deficient system of main thoroughfares. In London, for instance, they have had reason to regret the neglect of preceding generations who have failed to achieve that improvement of the street system which should have gone along with the gradual construction of the highly developed local railway net. Paris, while long suffering from insufficient railroad facilities, is better

RUE ST. VICTOR, PARIS, 1866
After the etching by Martial

supplied with both radial and, especially, circumferential street connections; its great railway termini, even if more accentric than most of those in London, are generally more easy of access, not one of them being so squeezed in as, for instance, the terminus of the Great Eastern and the North London Railways, the main entrances of which "discharge on to a street about 62 feet in width, leading to the heart of the city by a thoroughfare having a width of about 40 feet." "The location of the railway termini in London affords a flagrant example of disregard of the most elementary principles of town planning," is the general estimate of a well-informed contemporary observer. "A royal commission," the same critic says, "reported in 1846 against a proposal for a great central station in London, but recommended that if railways were hereafter admitted to the center, this should be done in conformity with a uniform plan. It is instructive to consider how absolutely this recommendation has been ignored."*

About a dozen of London's great railway termini are located on the circuit of a central area, the diameter of which measures, on an average, about two miles; in Paris all the main line railway termini, except one, are situated on a perimeter of slightly more than three miles' diameter. However, as the critic just quoted indicates, the advantages which the more central position of a majority of London's great railway stations may afford are very much counterbalanced by the disadvantages of a street system less well coördinated than the system of great arteries created in Paris, by Napoleon III and Haussmann. The greatest traffic improvement achieved in Paris since the creation of this street system has been the construction of subways, and it need not even be especially emphasized in what a high degree their establishment, as well as the construction of tramways, has been facilitated through the preceding extensive improvement of the street plan.

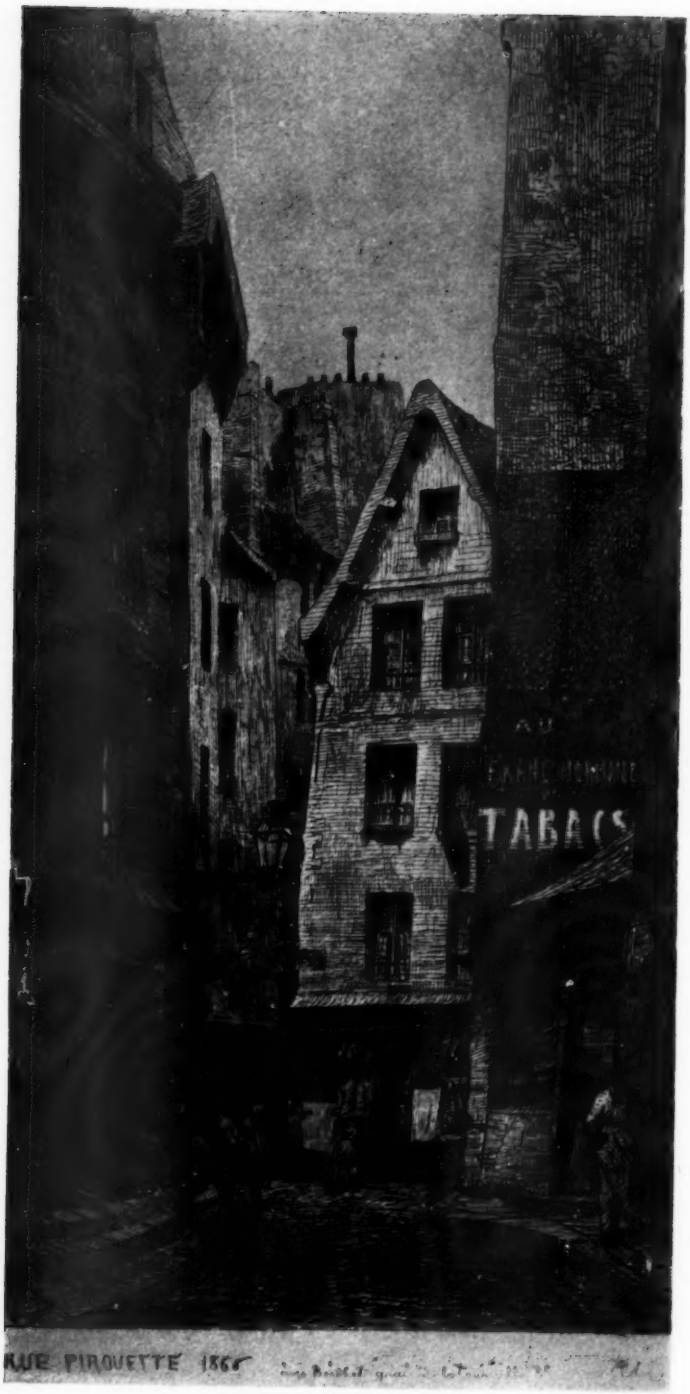
Preserving the Historic and the Beautiful

Incidentally, in this connection, it may be worth observing that a subway system, though more expensive than an equal system of elevated railroads as regards initial cost, in the long run will prove less expensive in a city like Paris, to which the preservation of its external attractiveness is of really great economic importance. The monetary interest may seem not altogether sympathetic as a motive, yet one could only wish that economic considerations would more often produce a similar, beneficial effect of safeguarding great esthetic values.

Respecting this matter there has been noticeable, in recent years, the awakening of a better conscience, anxious to preserve the beauty of the city and quite independent of the economic speculation surrounding the policy of protection. After having seen, in Paris, the state of dilapidation into which many old, historically or artistically interesting buildings or groups of buildings have been allowed gradually to fall, one cannot but feel grateful for the energetic reaction against destructive tendencies or against that passivity which, in the years preceding the war, manifested itself in the attitude of the city and of the state, and which was vigorously sustained in many quarters. Certainly, connected with the now planned

*W. E. Riley: "City Developing." In Transactions of the Town Planning Conference in London, 1910.

Rue des Trois Canettes (Île de la Cité), Paris, 1865
After the etching by Martial



Rue Pirouette, Paris, 1868
After the etching by Martial

RUE DE JERUSALEM, PARIS, 1862
After the etching by Martial. From a drawing by Potémoret

transformative operations are interests more vitally important to the community as a whole than the protection of the city's external aspects, yet in regard to Paris it may be maintained that indifference on this point would be especially deplorable at a time when the city is about to enter on a new stage of development.

The Central Regions Problem

Before devoting closer attention to this phase of the problem, it seems pertinent briefly to survey the most important measures affecting the central regions of the city. The necessity for many of these operations was already perceptible at the time of Haussmann, and some of them, as those dealt with in the preceding article,* were actually then planned. Perhaps most apparent at that date was the inadequacy of the connections in the directions north and south. The opening of the Boulevard Sebastopol did not relieve the traffic pressure in the adjacent Rue St. Denis and Rue St. Martin, to which Haussmann testifies in his "Mémoires." The traffic problem surrounding Les Halles, which had become especially acute since the reconstruction and enlargement of the market halls, was not solved through the opening up of the Rue de Turbigo, the Rue du Pont Neuf, and the Rue des Halles, the partial widening of the Rue de Rambutcan and other operations. Farther to the west, the inadequacy of the Rue de Richelieu as a passage between the inner boulevards and the region of the Louvre became increasingly evident. East of the Boulevard Sebastopol, a better connection between the vicinity of the City Hall and the neighborhood of the Place de la Republique has long been almost equally urgent. Consequently, in order to supply these circulatory needs, the Commission on the Extension of Paris suggests the widening of the Rue St. Denis, the Rue St. Martin, the Rue Montmartre, the Rue Montorgueil, the Rue J. J. Rousseau, the Rue de Richelieu, the Rue du Temple and the Rue Vieille du Temple. Furthermore, the program includes the cutting through of the Rue Beaubourz between the Place de l'Hotel de Ville and the Rue de Turbigo, actually begun before the war, the extension of the Rue du Louvre northward to the Rue Montmartre, the widening of the Rue de Vivienne, the Rue Notre Dame des Victoires, and the Rue Croix des Petits Champs, and, finally, the opening up of a new artery northward from the Rue Montorgueil to the Boulevard Magenta, with the object of establishing a convenient through route between the Halles and the two great railway termini on the north, the Gare du Nord and the Gare de l'Est. Meanwhile the question of removing the market halls to more peripheral localities and of converting their area into a

*"The Plan of Paris," The Journal of the American Institute of Architects, June, 1918.

CIRQUE DE L'IMPERATRICE
Drawn and lithographed by Ph. Benoist. Figures by Bayot

CIRQUE DE L'IMPERATRICE
Drawn and lithographed by Ph. Benoist. Figures by Bayot

PLACE ROYALE (NOW PLACE DES VOSGES)
Drawn by Ph. Benoist. Lithographed by Eugene Ciceri and Fichot. Figures by Bayot

garden square has been reconsidered. Even if this plan should materialize, the execution of the projected operations affecting this area would be advisable.

To improve the transversal connections in this region, Haussmann planned and also carried out, in part, the opening up of the Rue Etienne Marcel between the Boulevard Sebastopol and the Place des Victoires, and, farther north, the cutting through of the Rue Réaumur and of its continuation to the west, the Rue du 4 Séptembre. Of still greater importance at the time was, of course, the prolongation of the Rue de Rivoli eastward to the Rue St. Antoine. To supplement this work it has been decided to prolong both the Rue Etienne Marcel and the Rue Réaumur eastward to the Boulevard Beaumarchais, which operations will be facilitated through the possibility of widening existing narrow streets. The logical consequence of the extension of the Rue Etienne Marcel will be further to widen the Rue des Petits Champs and the Rue des Capucines, which, beyond the Place des Victoires, continue the Rue Etienne Marcel to the west. The great importance of these operations is evident. So far the only fairly direct convenient connection between the neighborhood of the Place de la Bastille on the one hand, and the vicinity of the Opéra and the Madeleine church on the other, has been by way of the Rue de Rivoli; the new arteries will offer two good alternative routes, thus apt to relieve the pressure on the Rue de Rivoli.

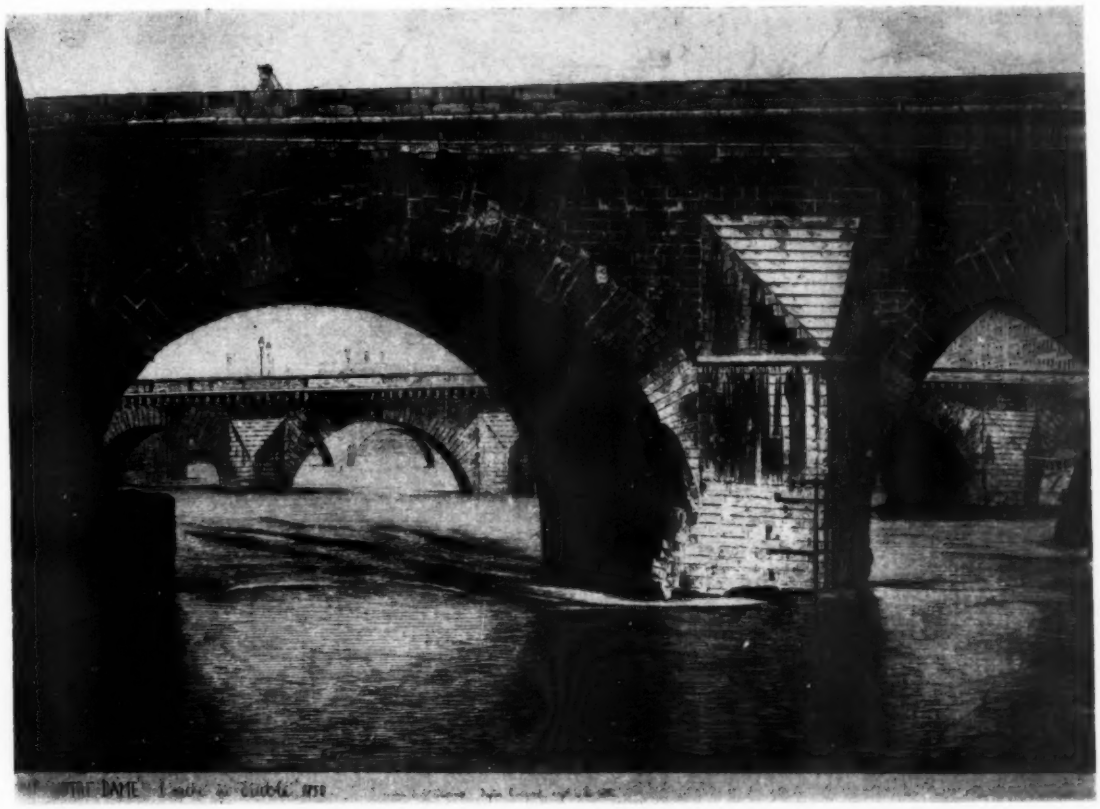
Moreover, in order to help relieve the congestion in the Rue de Rivoli, it has been deemed necessary to widen the Rue St. Honoré and the Rue du Faubourg St. Honoré as far as the Avenue Hoche. On the other hand, the Commission on the Extension of Paris has not accepted Hénard's idea of continuing this line eastward through the court of the Palais Royal, thus duplicating the east and west axis of the great *croisée* in its whole length.

South of the Seine

On the south bank of the Seine there has long been a most urgent need to provide better access to the Boulevard St. Germain. Between the Boulevard St. Michel on the east and the Pont de la Concorde on the west, there exists actually only one right-angled street exceeding 15 or 16 yards in width. Nevertheless, a very heavy volume of traffic is carried daily by the bridges crossing this stretch of the river, the Pont Neuf, the Pont du Carrousel, the Pont Royal, the Pont de Solferino. In this area, four separate operations either have been decided on or are considered.

To the prolongation of the Rue de Rennes, dealt with somewhat at length in the previous article, we have to add the widening of the Rue Dauphine and its access to the Boulevard St. Germain, and of the Rue du Bac, and finally the cutting of a new street opposite the Pont du Carrousel, to be bifurcated in the direction of the Rue de

PLACE DU CARROUSEL, PARIS, 1849
After the etching by Martial



PONT NOTRE-DAME (L'ARCHE DU DIABLE), PARIS, 1850
After the etching by Martial

Rennes and of the Boulevard Raspail. Like the extension of the Rue de Rennes, this last-mentioned operation was planned at the time of Haussmann.

The Various Schemes

An exhaustive review of the schemes mapped out by the Commission d'extension de Paris (which we do not propose to give) would have to enumerate more than a hundred particular projects, many of which are to be considered more as preliminary suggestions than as definitive plans. Three chief aims have evidently been kept in view: The improvement of radial thoroughfares, the improvement or completion of concentric or transversal routes, the opening up or widening of a number of diagonals in various, generally peripheral parts of the city. The new diagonal connections proposed are, however, neither numerous nor very extensive. There is nothing in this line on the scale of the Boulevard Raspail, the Rue de Turbigo, or the Avenue de l'Opéra. On the other hand, the need of these diagonals is obviously pressing, almost all of them having been classified among those improvements designated as "most urgent ones," for which means have been provided under the loan of 900,000,000 francs which the city was empowered to raise in 1909.

Losses Through Demolition

Several of these operations are particularly interesting from the viewpoint of communication, and only the limited space at our disposal prevents us from dealing with them more extensively. From an esthetic point of view, at any rate, our attention is first claimed by the impending transformation of the central quarters which is certain to entail the destruction of numerous ancient, historically remarkable, or beautiful buildings. Paris has to guard against precipitate devastation of this kind, but it has to guard, in an equal degree, against danger to the aspect of the city involved in the new building activity. Inasmuch as losses through demolition of noteworthy old structures are forced by necessity, and thus are unavoidable, the erection of new and intrusive buildings in places were they are likely to disturb the harmony of their surroundings is even a worse evil. This applies especially to the encroachments threatening the architectural units subject to the so-called *servitudes spéciales*, a kind of disfigurement which Paris has experienced in recent years. Obviously, extensive transformations, even when not directly affecting these units, will enhance the danger of intrusions being made through the erection of new structures in their vicinity. So much harm had actually been done prior to the war that the

ESTACADE BETWEEN THE ÎLE ST. LOUIS AND THE ÎLE DE LA CITÉ, PARIS, 1840
After the etching by Martial

matter challenged violent criticism. On the one hand, several transgressions of the laws protecting the aforementioned architectural units had occurred, facilitated, it seems, through connivance or neglect on the part of the authorities. This was the case regarding, for instance, the Rue de Rivoli and the Place de l'Opéra. On the other hand, in consequence of the building ordinance of 1902, permitting greater maximum height of buildings and greater liberty in composing the elevations, bulky and, architecturally, all but regretful houses have been built in disturbing proximity of architectural units,—the Place de l'Etoile among others,—jeopardizing the harmony, balance, and dignity of their aspect. The ordinance of 1902 has also been made largely responsible for the violations of the "special servitudes," inasmuch as this law represents a general tendency apt to call forth such transgressions. Therefore, the main target of the attacks upon the destructive practices has been this law which brought about several useful reforms, for instance, in stipulating the provision of greater court areas, but, which on the other hand, went to an exaggeration in regard to permissible heights and, in loosening previous restrictions, invested the individual builder with too much liberty in framing the fronts and the outlines of buildings.

The Blot of High Buildings

It is this ordinance which has made possible the construction of architectural monstrosities like the Hotel Lutetia, at the corner of the Boulevard Raspail and the Rue de Sèvres, of the frightful "towers of Babel," erected close to the Place de l'Etoile, and of hundreds of other buildings in all parts of the city which stand as so many evidences of the blunders committed when certain infunctions of the ordinance were framed. Reaction against the new regulations has been natural on the part of those who hold that great creations in city planning should be placed on a level with other artistic *chefs-d'œuvre*, and, consequently, should be accorded, as far as possible, an equal protection. It was high time to sound the alarm when buildings of little or no artistic merit (often characterized by the most hollow, bombastic pretension, and, as regards height, expressive of a dawning ambition to emulate American skyscrapers) began to invade the Avenue des Champs Elysées, the neighborhood of the Place de l'Etoile, of the Place de la Concorde, the Place Vendôme, and the Place de l'Opéra.

However, a differentiation could, of course, be made between those parts of the city where protection is an especially vital interest from esthetic viewpoints, and those quarters where less vigorous regulations seem admissible. In other words, with a view to safeguarding the esthetic aspects of the city, a districting according to bulk, determined from these viewpoints, could be resorted to. Equally evident is the need of establishing building zones where the formal reticence secured by previous ordinances should be maintained. Street perspectives and architectural groups

of a uniform classical complexion and of acknowledged artistic merit ought not to be interfered with through letting loose too much formal freedom in their immediate vicinity. There are even those who deem it advisable to go to the reactionary extreme of restoring to general practice all the austerity of the earlier legislation. In their opinion, the institution of the new restrictions represents an unsuccessful attempt to introduce more diversity of design, unsuccessful in that architectural license has supplanted architectural discipline. They would rather prepetuate the monotony of effect sequent to the latter than see the streets of Paris, the stronghold of restrained classical art, developed into fields of experimentation for all kinds of showy architectural "individualism." To a great extent, they admit, it is a choice between unpretentious banality and pretentious platitude—and they rather prefer the former. To vindicate their choice and their opinion, they can point to the many instances where the temptations involved in the less rigorous restrictions regarding projective features and vertical developments have led to distasteful extravagance of display or even to vulgar formal excesses.*

*The craving for uniformity which, in concurrence with height limitation, may be conducive to an impressive unity of effect should certainly not be pushed to an exaggeration. The legitimate place of such uniformity is, however, the broad and straight avenues of our great cities, bordered by many-storied apartment houses, and not the streets of suburban quarters, lined by family dwellings. Unfortunately, contemporary building practice has extensively proceeded in the reverse manner, uniforming the detached family houses and constructing apartment buildings which from afar announce their demand for individual recognition.

The Ordinance of 1912

Sixteen years have elapsed since the much-discussed law was promulgated. But, more than ten years ago, its injurious consequences had become so apparent that the matter was taken up for consideration in the Chambre des Députés. A modification of the ordinance was declared desirable and the Government was invited to take steps for bringing about a reform. At the same time, the representation requested that the Government should "enforce the laws, regulations, and compacts which guarantee the beauty of Paris." Within a short time, the Municipal Council discussed the question and took similar action. Yet the demanded revision, resisted, of course, by a great fraction of the house-owners, does not seem to have materialized so far.*

The enactment of this ordinance was, no doubt, at the time disapproved of in the French capital by many individuals and associations that are especially interested in the preservation of the esthetic aspects of the city, and

*Of the quite prodigious literature dealing with the ordinance of 1902 and its detrimental effects, only some of the most important may be mentioned: Charles Lortsch: La beauté de Paris et la loi. Paris, 1912; Conseil Municipal de Paris, Rapports et documents, 1908, No. 82: Rapport au nom de la 3me commission au sujet du projet de modification du décret du 13 aout 1902 portant règlement sur les hauteurs et les saillies des batiments à Paris. Présenté par M. Adolphe Chévioux, conseiller municipal; 1909, No. 7: Proposition relative à l'aspect de Paris et à l'observation des lois, réglements et servitudes concernant le style et la hauteur des maisons; Présenté par M. Emile Massard, conseiller municipal, 1909, No. 37: Note complémentaire à l'appui de la proposition rélative aux aspects de Paris, au style et à la hauteur des maisons; présenté par M. Emile Massard.

PONT ST. CHARLES, PETIT PONT, AND PONT ST. MICHEL, PARIS, 1838
After the etching by Martial. From the drawing by A. Varin

RUE DE LA VIEILLE LANTERNE, PARIS, 1854
After the etching by Martial

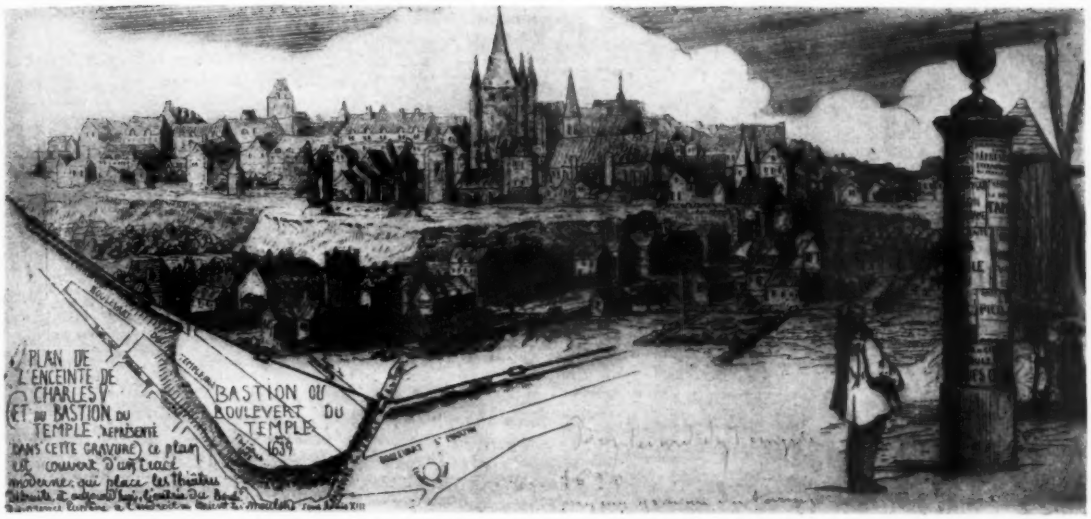
who foresaw its detrimental effects. As its menace has become increasingly apparent, their apprehension in regard to the future has grown, especially in view of the impending transformations. By causing disfigurement, the ordinance will, if maintained, increase the esthetic losses which these operations necessarily will entail. The doom of many an old building, well worthy of being preserved by virtue of artistic value or historical interest, will be sealed. With a view to preventing, as much as possible, this kind of loss, an increasing activity has developed in Paris in recent years. The "inheritance from the past" is no more so exposed to indiscriminate devastation as it was during the last century, especially during its earlier half. Many, perhaps most, of the vandalistic acts were given a sort of sanctity by being committed in the name of "public utility." An euphemistic pretense, when one considers how there were sacrificed many ancient, memorable structures which could have been saved by being adapted for other purposes or by a slight modification of city-planning schemes. The secularization of feudal and ecclesiastic domains during the Revolution was followed by a real tempest of devastation. In framing the projects for the replanning of Paris, collectively known under the name of the "Plan des Artistes," the Revolutionists planned nothing less than a systematic destruction of these estates. Their confiscation was, so to speak, at the basis of the schemes, many of which were of the most problematic utility, while the execution of almost all of them would imply the destruction of one or several ecclesiastic or feudal buildings. Under the circumstances, it is not strange, incidentally, that the "Plan des Artistes" appears rather to be a mere juxtaposition of schemes than to embody an effort to combine and coördinate them in an organic, well-determined way. To some extent, the plan was a compilation of earlier, sporadic projects.*

The Passing of Old Paris

However, while none of the projects contained in the plan seems to have been realized during the Convention or the Directory, not less than fifty-seven ecclesiastic establishments had been demolished before the beginning of the Consulate! In the period 1800–1814 another twenty-six were pulled down, thirty-one between 1814 and 1830, eleven between 1830 and 1848.† These figures sufficiently prove that the Second Republic and the Second Empire are not alone responsible for the devastation of

*This was the case to so great an extent, indeed, that some of the esthetically and otherwise most important of the projects contained in the plan, which was compounded in the years 1794–96, belonged to the group of adopted ones. Thus, the later Rue de la Paix and the Rue Castiglione had been suggested by Abbé Langier in his "Observations sur l'architecture," published in 1765. The idea of opening up a street along the Tuileries garden, coincident with the Rue de Rivoli, may be traced as far back as the time of Louix XIV, and it was urged by the architect Petit-Radel in 1789 (see his "Description d'un projet pour une salle on basilique national"). The interesting project for an avenue to be opened up in the main axis of the Colonnade du Louvre, according to testimony of the architect Boffraud, had originally been discussed simultaneously with the planning and erection of the Colonnade (see Mercure de France, June, 1755), and it was revived by Langier in his above-mentioned work; the idea of transforming the emplacement of the Bastille into a vast circular place had been put into definite form by Palloi in the year 1792 (see Palloi: "Addresse et projet général dédié à la nation"); finally, those projects which aimed at forming a place and avenue in front of the Church St. Sulpice and at the disengagement of the Panthéon and the opening up of a street (the later Rue Soufflot) in its main axis reproduced, in the main, original projects by Servandoni and Soufflot, respectively.

†According to statistics communicated by Eugène Despois in his work, "Le vandalisme révolutionnaire." In this connection it is interesting to recall the circumstances which account for the preservation of the Tour St. Jacques. Being the bell-tower of the church St. Jacques-la-Boucherie, which was disposed of and demolished, the Tour St. Jacques was saved only through the intervention of the architect who transacted the sale. On his own responsibility, he introduced into the deed a special clause according to which the preservation of the tower was made a condition.



PARIS, 1639.—THE MODERN BOULEVARD DU TEMPLE IS TRACED TO SHOW THE TRANSFORMATIONS
After the etching by Martial. From an engraving of the period

PASSAGE DE LA MARMITE, PARIS, 1863
After the etching by Martial. From a drawing by Maxime Lalanne

Quais de l'Ecole, de la Megissérie and the Pont-Neuf, Paris, 1851
After the etching by Martial

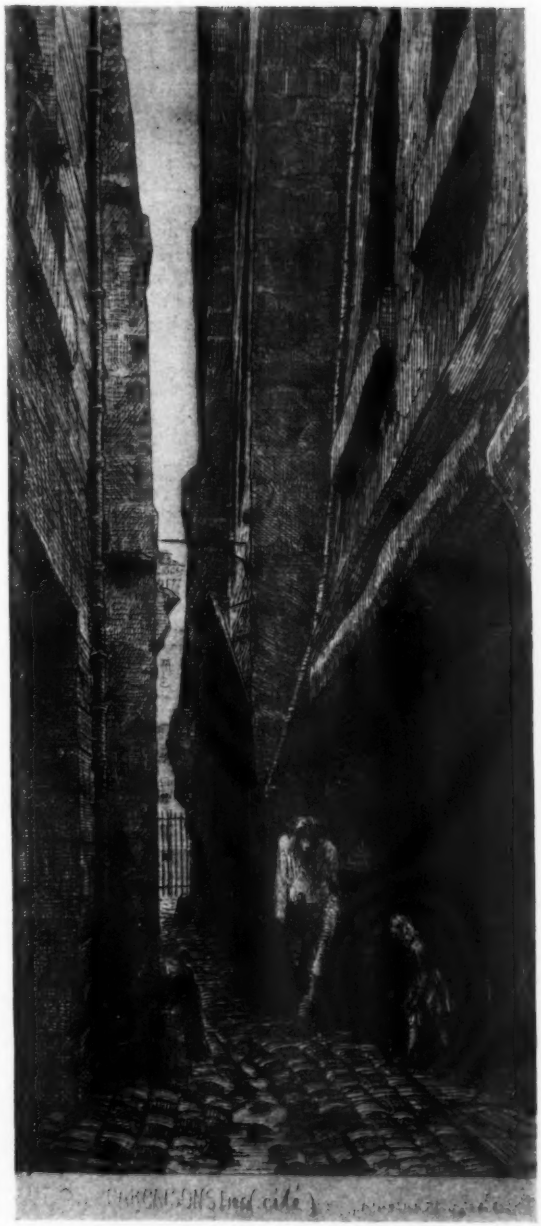
Rue du Pourtoir St. Gervais (les Charriéres de St. Gervais), Paris
After the etching by Martial

"le vieux Paris" which has taken place on so large a scale since the Revolution. They even go far toward explaining why Haussmann was able to carry through his work with the sacrifice of comparatively few noteworthy buildings, taking into account the great scope of the transformations and the inflexible, reckless method of penetration which he employed almost throughout. Moreover, it may be maintained that Haussmann, on the whole, only sacrificed what the execution of the plans absolutely demanded, while during the preceding period much havoc was wrought without a similar excuse, by sheer indifference to the relics of the past or, worse, by the savage desire to remove the stones which seemed to symbolize hated institutions.

The Great Transformation

However, through Haussmann's transformations, the aspect of the city underwent extensively a sudden radical change. While the work was in progress, the impression of devastation must have been an overwhelming one. Whole quarters were suddenly leveled with the ground, and the city was traversed in all directions by hideous gaps, indicating the course of new streets and avenues. The saying, attributed to an English visitor to Paris at the time, humorously characterizes the impression of the gigantic revolution taking place: "Singularly, the *Illustrated London News* has had nothing to tell us about this earthquake!" Certainly, more than a clear realization of the actual damage done, it was this cataclysmic character of the transformations that stirred many of Haussmann's contemporaries, especially as "the cataclysm" involved great inconveniences, enormous expenditures, and serious economic consequences. While the economic and financial aspect of the matter supplied Haussmann's political antagonists with their main arguments in attacking the transformations, they did not fail to make the sentimental reflections suited to the case and certain of a popular approval almost equally great. Largely, this criticism was all but well founded, born of hypersentimentality apt to hold everything sacrosanct that was sufficiently old to possess a certain flavor of antiquity. Haussmann had an easy task in justifying the destruction of congested, filthy quarters, sometimes picturesque to the eye but in reality often containing little or nothing of distinctive artistic value, and extremely objectionable in their sanitary and moral aspects.

On the other hand, it cannot be forgotten that the transformations, conceived in an uncompromising spirit as they were, also brought with them all but desirable esthetic consequences. The way in which certain monumental buildings, still preserved, were affected with regard to their situation, their relation to their surroundings, seems perhaps most deplorable. This applies especially to the disengagement of the cathedral of Notre Dame, begun under Napoleon I and radically carried through according to the imperial decree of 1865. The whole operation affecting the Île de la Cité has approximately been characterized, as to its effects, as *la mort de la cité*. The thoroughgoing replanning of the island, which for sanitary reasons had been demanded ever since the middle of the eighteenth century, was carried out on a very awkward plan, less sweeping than the adventurous scheme proposed by the architect Patte of the last mentioned date, but distinguished by



Rue des Carcaisons, (Cité), Paris, 1851
After the etching by Martial

an equally cold and rigid rectilinearity, while entirely lacking its artistic grandeur. Patte's project, *un beau rêve*, which proposed to join the Île de la Cité and the Ile St. Louis, and to sweep away almost everything except Notre Dame, was conceived with streets too uniformly narrow for the needs of the present day; Haussmann, on the other hand, created the desert which is called Place du Parvis Notre Dame, in front of the cathedral, placing it

in the position of a show-building at a world fair and, one may say, severely violating its architectural character. Says a well-known writer on Paris under Napoleon I, regarding this transformation: "The dominating idea was to facilitate the evolutions of the imperial cortège; but esthetic reasons were given as a foremost motive. The buildings which concealed the cathedral and made it impossible to appreciate its imposing aspect must be removed, it was said. This was a first step toward that complete isolation which the archeologists of the present day are inclined to condemn as contrary to the historical truth."*

Though, perhaps, chiefly actuated by practical motives, this was a performance which the propagators of neo-classic city-planning doctrines, Langier for instance, would have applauded as "artistic." We think otherwise and want to keep "classical" city-planning conceptions at a respectful distance from old Gothic cathedrals. Haussmann's transformations have, through the disengagement of Notre Dame and through other kindred performances, contributed to inculcate the importance of more flexibility, of a more discriminate adaptation when attacking the delicate organism of an old city. While some of the violent inroads on the city structure led to the creation of streets and open spaces, the practical utility of which equals their esthetic merit—the Avenue and Place de l'Opéra for instance—Haussmann undoubtedly, in many cases, could have achieved both better practical and better artistic results by being more mindful of the actual physical constitution of the object to be improved. The lines of a new conformation were superimposed on the lines of an old one, skillfully, but with too much love of symmetry for symmetry's sake, often too much calculation being spent on the attainment of, in reality, sometimes trifling effects. From an esthetic viewpoint this is on the debit side of the work, while on the credit side there are achievements proclaiming that even during the sixth and seventh decades of the last century, city planning was not dead as an art in France, whereas everywhere else it was either merely imitative, with French performances as a model, or had entirely expired and sunk to the level of an inane engineering routine.

*L. de Lanzac de Laborie: Paris sous Napoléon: Administration; grands travaux, p. 131.

Past and Future

This is to be remembered. But the present generation also remembers the failures and shortcomings attending the great transformations. They have sounded their warning now for several decades and not entirely in vain, it is to be hoped. One may see a specially encouraging sign in the fact that the Commission on the Extension of Paris has recommended the method of widening old streets, instead of opening up new ones, to be extensively applied in carrying through the new operations. The process of amelioration, in many instances, will be a very gradual one, extending over a great number of years, and being largely based on an application of the so-called *servitude d'alignement* (building-line), combined with expropriation when deemed necessary to attain a speedier result. Moreover, the committee on the extension of the city has, for economical reasons, proposed to widen streets by establishing a building-line only on one side, and not, as mostly hitherto, on both sides, a method which, if judiciously applied, may serve both protective and preservative purposes. Besides, the interests of *le vieux Paris* are at present taken better care of than at any previous time, especially through the activities of the archeological societies of the various *arrondissements*, of the influential *Société des amis des monuments Parisiens*, and foremost, of the official Commission du vieux Paris, instituted in 1897 at the request of the Municipal Council. Much harm may be prevented through the persistent vigilance of these institutions

PALAIS ROYAL
Drawn and lithographed by Ph. Benoist

The Draughtsman's Page

GEORGE BAIN CUMMINGS, Associate Editor

HOW TO WIN A COMPETITION

THERE was held recently in New York a limited architectural competition. The proposed building was to be of considerable size and importance; the remuneration and prestige offered to the successful competitor were quite well worth his best effort. Coming during such an unsettled period as the present, with so little new work finding its way into the offices of architects, such a commission as awaited the winner of this competition would be most welcome. There was every reason, therefore, why the competition was worth winning and, consequently, worth trying hard for.

The winning solution was a distinguished design. The most careful study was evident in the elevation, the most thoughtful consideration in the plan. It was apparent that every aspect of the problem had received scrupulous attention, and every feature of the solution evidenced deliberately weighed judgment.

The solution which seemed generally to be rated second fell measurably below the standard of the winner. A confident handling of the problem, which only the most thoughtful study and critical analysis could impart, was lacking. There was not the sure mastery of the problem that the winning solution revealed.

Shortly after the judgment and exhibition of this competition, I learned, from draughtsmen employed in the offices of the architects producing respectively the two solutions discussed above, the manner in which the solution had been arrived at in each case. The comparison is of more than passing interest.

In the office in which the winning design was produced, the program was placed before the whole organization. It was studied and discussed by all, from the principals to the most junior draughtsman. From this action—that of a Committee of the Whole—the scheme was arrived at. The various members of the force took up this scheme and worked out its details. Nothing was accepted or decided until it had been presented to the rest and subjected to their analysis, criticism, and suggestion. This was a collaborative effort in which everyone in the organization bore as large a share as he was able to assume. The result was a collaborative solution, which might be expected to survive critical analysis, inasmuch as it had been produced by such an analysis on the part, not of one, but of several, trained persons.

In the other office, a different and more usual procedure had been followed. The principal and two or three others studied the program and determined the scheme. They made the initial sketches and determined the essential elements of the design and then turned the scheme into the draughting-room to be drawn up and presented. Those who worked on it had no control over the design, no opportunity to criticize or discuss it with the few who had determined it. Some of them felt that fundamental mistakes were being made in this solution of the problem, but there was no appeal. This condition chilled the enthusiasm of the organization and made the members silent, if not openly hostile, toward the solution.

The first office produced a winning solution, the other a losing solution. I am not attempting to prove cause and effect in this instance, although I believe that would be easy. I am simply presenting facts. Furthermore, let me say that I do not insist that in such a procedure as that described do we find an infallible recipe for winning a competition. As a matter of fact, you and I are not particularly interested in the familiar type of competition. What I would have you read from the title of these notes is, that there is a big Idea, in the working out of which an architect may achieve Success. The essence of that Idea is a new conception of the relation of an architect to his draughtsmen.

Your draughtsmen are of two general kinds—live and dead. The dead ones are simply draughtsmen—never to be more or otherwise. They are worth very little to you. They work for you by the hour at an established gait. They have no enthusiasm for the work, for your success' for their own futures. They may be round pegs in square holes, or they may be handicapped by lack of education and contact with fine things. In either or any event such a man is a poor investment for you, and is making a poor investment of himself. Study his case, urge him to get into a line of work for which he will have some enthusiasm, help him make the right connection; or strike some spark to quicken his dying soul and arouse ambition and enthusiasm in him toward the work in hand. Briefly, fire him, or *fire* him, but don't exploit him. Don't shake your head over him and say, "Poor fellow, he'll never be anything but a draughtsman," and then continue to pay him starvation wages and reflect comfortably that if his work is not brilliant it is at least steady, and surely is cheap enough.

Of course, the majority of your draughtsmen are the other kind—live ones. They are really not draughtsmen at all, but architects in the making. The difference between them and you is simply one of degree in proficiency and experience. (And sometimes the balance tips to their side!) Every once in a while one of your best men drops into your office to say that he has landed that big job or entered into a favorable partnership arrangement. And so he is added to the list of practising architects. And you select another man to move up into the position he has vacated, and that means you have to hire another junior draughtsman or a young college graduate, or promote the office boy and hire another youngster. And so they pass up through your organization. You take them in at the bottom raw and green, but eager and teachable; you graduate them finally, and compile a list of the firms you have fathered and trained. And one day your last call comes, or you retire from active work to grow old leisurely, and your head men step into your shoes and carry on the practice. Don't you see that with these live draughtsmen,

as it was with you, it is a progression, and that from the time the young man decides that if he is to find his immortal soul he must be an architect, he must be rated and reckoned with as an architect in the making? Are any of us in danger of ceasing to be "in the making"? May an architect cease to learn and develop, with impunity?

And so these live draughtsmen of yours, these potential architects, are your professional brothers just as much as are your fellow Institute members. Your welfare and theirs are coincident. They are your brain and muscle, your strength and genius, if you will but let them be, if you will but acknowledge them. How senseless not to make the most of your investment in them; how foolish not to utilize their talent, their youthful imagination, their spiritual fire! The architect who won the competition was wise, for he did so utilize those priceless qualities.

The unrest sweeping and rocking the world is gripping these draughtsmen. We hear of unions of them formed or contemplated. They would not be in such movements if the architects generally had pursued an enlightened policy toward their employees. Even now they look to other fields of work, preferring another career to the alternatives of standardized labor or allegiance to a tottering—is that too strong a word?—at least a floundering, profession.

Whether you have a competition on the boards or only a job, or six of them, sort your draughtsmen into the dead and live classes, get rid of your dead ones or transform them into live ones, and then sit down at the same table with them all, and talk and think and create together. Collaborate—not because it may be the way to win a competition, but because it is the only way in which the true architectural tradition can be carried forward—and things that do not go forward go backward. Nothing stands still.

The Housing Problem in Paris

By NILS HAMMARSTRAND

QUITE apart from the unparalleled reconstruction problems in the devastated regions, France is now confronted, especially in the large cities, with housing conditions so extensively bad as to cause the greatest alarm among men acquainted with the facts and able to survey and to judge the situation. It may safely be said that however serious the housing conditions may be in practically the whole European world, as well as in the United States, they are incomparably aggravated in France, not only owing to the German invasion and its consequences, but also because they were, before the war, perhaps worse than in any other European country, at least in regard to the large cities.

In estimating the situation, we have to reckon with the pre-war conditions just as much as with the fact that about 600,000 dwellings have been destroyed in the war, and that building activity during this period was reduced to an almost imperceptible minimum. As regards Paris especially, its very extensive and very unsatisfactory housing conditions were much discussed in the years preceding the war, claiming the attention of the authorities of the city as well as of the state; little or nothing toward effective improvement had been achieved, however, when the thunderbolt of war suddenly struck the country. Since then the situation has constantly become worse.

"The housing crisis has been aggravated during the war. Scarcely any houses have been built. Those which were in course of construction in 1914 have not been completed. The afflux of refugees has made the deficit felt still more." Thus M. Henri Sellier, *conseiller général de la Seine*, sums up the situation in the Department of the Seine, in a paper soon to be published.*

Regarding the effects of these conditions, M. Sellier then makes the following statements: "In the Department of the Seine as a whole, half of the population is badly housed. And, contrary to the opinion generally entertained, it is in the suburban areas that the effects of this deplorable situation make themselves most strongly felt. The demographic plans published in our report on the constitution and organization of the *office départemental des habitations à bon marché de la Seine*, are eloquent on this point. They represent, according to the results of the official census of 1911, the situation in the twenty arrondissements of Paris and in the seventy-eight extramural communities, as regards the density of the population, the mortality in general, the mortality in consequence of tuberculosis and the housing. At the very first glance one notices, unfortunately, the almost complete coincidence between the plan representing bad housing and the plan illustrating the mortality on account of tuberculosis. One also observes, in consulting the first-mentioned plan, that Paris has four arrondissements where more than 500 out of each 1,000 inhabitants are badly housed, while, according to the other plan, only one of its twenty arrondissements has a tubercular mortality exceeding 500 per 100,000 inhabitants. All the other agglomerations presenting such high mortality figures are to be found in the suburban areas."

It is to be observed that before the war, Paris, among the great capitals of the world, had the greatest mortality through tuberculosis. "And unfortunately," M. Sellier says, "it is no longer doubtful that the proportion of tubercular mortality and morbidity has increased during the last five years." Consequently the improvement of the housing conditions of Paris constitutes an unusually grave and urgent problem.

The question arises as to what initiatives and measures have been taken to remedy these evils. During the war it was scarcely possible to take action on any large scale with a view to supplying more hygienic housing. It was mainly left to the *office public d'hygiène sociale du département de la Seine*, instituted in 1916, to combat tuberculosis through various measures aiming at a better and more ex-

*By the much-appreciated courtesy of M. Auguste Bruggeman, prominently connected with the *office public d'habitations à bon marché du Departement de la Seine*, a copy of this paper, on which the present article is based, has been accessible to the writer before publication.

tensive treatment of tubercular cases. The activity of the office of which M. Sellier gives an account, is being constantly widened.

Important as this activity undoubtedly is, it is, however, only a palliative agent. Betterment of the bad housing conditions, which are at the root of the evil, constantly aggravating it, will be the only effective remedy. As M. Sellier indicates, they are even worse in the suburbs than in the city proper, which circumstance serves to confirm the fact that the rational development of the suburban areas has been neglected in the very highest degree. The powers of the city, in the matter of planning, have not reached any farther than to its jurisdictional limits, the authorities of the Department of the Seine have failed to take the necessary initiative, and the suburban communities have either not been able or not willing to handle their own development in a satisfactory way.

The New Town Planning Act

An important initial step toward putting an end to this state of mismanagement has been taken of late. According to the law of March 14, 1919, extension and improvement planning is obligatory for cities of 10,000 or more inhabitants, as well as for smaller cities under certain conditions, and as regards the communities of the Department of the Seine, all of them, without exception, are subject to this obligation. It is in virtue of this law that the Greater Paris competition has been set afoot.

However, earlier initiative by the Department of the Seine and by the Municipal Council of Paris are also to be recorded, such as the constitution of the *office public des habitations à bon marché du Département de la Seine*, by the former, and of the *office public des habitations à bon marché de la Ville de Paris*, by the latter. These two institutions, established and organized in recent years on the basis of the law of December 23, 1912, respecting *offices publics d'habitations à bon marché*, have lately begun to combine their efforts. The departmental office seems to have been the more active so far, and it has published an extensive, well-composed, and instructive report regarding its constitution and its activities up to the beginning of 1919.

At an expense of ten million francs, the office has acquired land in the ultra-suburban areas aggregating nearly 500 acres. This land, at Plessis-Robinson, Châtenay-Malabray, Suresnes-Rueil, Champigny, and Stains, is to be developed into garden cities in accordance with plans prepared by the office. The building operations will be undertaken either by associations for erecting low-cost houses or by communal offices, which will have to conform to the conditions imposed by the plans and erect houses answering the requirements of the law. Preferably, detached family houses are to be built; the erection of compound, but small-sized dwellings is to be limited as much as is compatible with economic necessities and social needs. Each of these garden cities is intended to form an urban unit, having its own administration buildings, schoolhouses, coöperative restaurants, library, public baths, theatre, post-office, playgrounds, etc. Purchasers of land in the new garden cities will, of course, be accorded most favorable economic conditions; the element of speculation is entirely excluded, and the land is now encumbered with a value less than half of what it would have been if in the hands of the private speculator.

Besides, the departmental office for low-cost houses has already entered on the enterprise of constructing, at Suresnes-Rueil and at Stains, satisfactory dwellings for numerous families. Moreover, independent of its proper activities, the office has very recently been entrusted with the task of building 600 detached houses in the environs of Paris and of acquiring all houses partially built before the war, in order to finish their construction.

The importance of these efforts, even though representing only a modest beginning, should not be underestimated. Progress toward the much-needed practical achievements is evidently being made, and if it seems less rapid than would be desirable, the unusual difficulties caused by the present abnormal situation in France should be taken into consideration. At all events, these recent initiatives may signify the beginning of a new era in the development of the city when comprehensive action and concerted effort, extending far beyond the present city boundaries, will definitively supersede the chaotic methods prevailing heretofore. In M. Sellier's paper the necessity of taking a broad, comprehensive view of these matters is being duly emphasized, and he accentuates the fact that the new endeavors to improve the housing conditions are not to be regarded merely as sporadic attempts, but that they have been made without losing sight of the general administrative, economic, and social problems, the solution of which will make out of the Department of the Seine a complete and harmonious urban whole—the greater and yet better Paris of the future.

The Extension Competition

It is therefore with the greatest interest that one looks forward to the forthcoming results of the Greater Paris competition, even if these results are almost certain to be unfavorably influenced by various adverse circumstances.* The competition should, at all events, not fail to serve as a stimulus, being, as it is, the first great manifestation of a new city-planning policy, inspired by unified aims, to be achieved only through the widest and closest coöperation. But it is after the competition that the first great test of this policy will come. Will conditions and circumstances arise which will thwart the efforts of those men who at present, animated by the best purposes, devote themselves with untiring energy to bringing the matter safely through its most difficult, incipient stages? This question is not being asked without some apprehension.

*The competitors have had an altogether too short time, only six months, in which to prepare their projects. Further, the best city-planning ability of France is at present intensely occupied by the problems of the devastated regions, a circumstance which, quite especially, should have favored a longer competition period. Finally, the difficulties of the competitors are enhanced through the lack of sufficient statistics regarding the population in the suburban areas, according to information obtained by the writer during a conversation with M. Edouard Fuster, *professeur du Collège de France* and *President de l'office départemental du placement et de la statistique du Travail*.

Law Relating to the Arrangement, Beautification and Extension of French Cities

ENACTED IN PARIS, MARCH 14, 1919

In plain and simple language, France has ordained that every city of 10,000 inhabitants, every village of 5,000 inhabitants which in any five years is increased by 500 souls, every health or vacation resort, every grouping of buildings of a historic or picturesque character, is required to have within three years, a "scheme of arrangement, beautification, and extension." Any city or town of whatever size, partially or entirely destroyed by war, fire, or earthquake is to prepare, within three months, an outline of such a scheme.

The scheme is divided into three parts: First, the plan showing the highway system, parks, and playgrounds and land to be held in reserve. Second, the program dealing with archeologic and esthetic values, building heights, water and sewage systems. Third, "The regulations of the method of application of the measures provided for by the plan and the program."

Commissions in each prefecture and one national committee will oversee the execution of the plans. It is especially to be noted that each town plan must be accompanied by a statement of the financial considerations involved. This important detail has been too often omitted in town-planning projects in the United States. No nation has ever embarked upon such a far-reaching program. Not only cities and towns, but even villages which show any signs of growth, are compelled henceforth to conform to a predetermined road map.

There is something very heroic about all this. A country which has but lately emerged from a war in which over one-half of its young men were lost, during which it has seen the major portion of its industrial cities laid waste, and by which it has been saddled with a debt which cannot be even materially reduced for many years, could well be excused if it confined its efforts to satisfying only its most urgent needs. It would not have been reasonable to expect anything else and yet France, evidently realizing the waste in lives and treasure inseparable from uncontrolled urban development, has resolved, cost what it may, that henceforth all of her towns, great or small, shall be able to govern their lives and growth in accordance with a carefully considered "scheme of arrangement, beautification and extension." JOHN IRWIN BRIGHT,

Chairman of Committee on Community Planning of the American Institute of Architects

British Housing Notes

The British press, for December, both general and architectural, deals at great length with the housing problem which has now assumed such magnitude as to force it constantly into front-page display and editorial comment. But the conspicuous display does not help one very much if one is bent upon discovering what is likely to be done to relieve the situation, for, apparently, no one seems to know—and least of all the Government. A clear statement of the situation is therefore difficult, if not impossible, since a study of this confusing mass of evidence at hand leads up to the query—who's looney now?

But out of this mass of news and editorial comment at least two facts emerge in plain view: the seriousness, the extreme seriousness, of the situation is now universally recognized, and all hands, including the Government, are bent upon finding a solution. Beyond this point chaos reigns.

Of course, there is debate about "concrete houses with a variety of frontages—with a common interior—built in a week by unskilled labor;" "wooden houses to be erected at less cost;" "ready-cut houses;" "houses without this, that, and the other thing," and so on *ad infinitum*. All of these debates about the physical side of the problem fall into the background behind that which has to do with finance and the problem of securing a sufficient quantity of labor and materials. And of these latter problems, the subject of how to finance the operation of building rather more than 500,000 houses at £800 to £900 each remains the central point of discussion, the axis around which all other considerations are made to revolve.

The situation, as very recently developed, may be briefly presented by quoting from *The Architects' Journal* of December 17:

"The Housing (Additional Powers) Bill, has been read a third time in the House of Commons. Briefly the provisions of the Bill are:

"(1) To make grants to persons or bodies constructing houses for the working classes, the aggregate amount of such grants not to exceed £15,000,000.

"(2) To meet expenses incurred in converting houses into flats.

"(3) To prohibit building operations which interfere with the provision of dwelling houses.

"(4) To prohibit, under a penalty, the demolition of any house reasonably fit, or capable of being made fit for habitation.

"(5) To empower local authorities to raise money by the issue of local bonds.

"(6) To enable local authorities to acquire land for garden cities or town-planning schemes.

"Dr. C. Addison, the Minister of Health, during the course of the debate on the second reading, said that the

reason of the delay in building was the difficulty of getting an economic return in rent, and this difficulty still existed in a greater degree. To meet the emergency they must look to local authorities, with the State behind them, and to provisions for local authorities to call private enterprise to their assistance. The schemes on which three-fourths of the local authorities were engaged had abundantly justified the method adopted. The delay up to the stage of acquisition of land and preparation of plans had been disastrous. The main causes of delay were the high cost of materials and the existence of other attractive forms of work for builders. He had arrived at an agreement with the building trade for the erection of a minimum number of houses under the national scheme. If it paid men to build houses now they would be building them, but there was no market for them at the present cost of erection. Under these proposals, they had decided that the subsidy be from £160 to £100, according to accommodation. Constructional standard should comply with local by-laws, and the houses would have to be well constructed and properly finished. They could not make the scheme retrospective to apply to houses already begun. The subsidy would be given to anybody who could build houses of the kind required in a satisfactory way. The houses must be begun within twelve months, but as a certain number of houses at the end of that time might not be completed, it was proposed to give three months' grace in respect to them, deducting the amount of the subsidy by one-twelfth for each month beyond the twelve months. Dr. Addison believed that, with the subsidy, it would be possible for a large number of private builders to build houses which they would be able to dispose of as a commercial proposition. A large number of offers had come in. Provision was also made for additional assistance to public utility societies. The proposal of the Committee that they should make it easy for local authorities, by the issue of housing bonds, to finance their own housing schemes was sound. Since the debate the other day the building trade had been coöperating most heartily with the Ministry in furthering the schemes of local authorities. He felt certain that if the House passed this Bill it would materially relieve the housing position."

Naturally there is debate regarding the operation of this program, for no one can apparently foresee what would happen to rents in houses built in pre-war days; and with respect to the subsidy, the question most generally debated is—Who gets it? The drift of things concerning this point may be expressed by quoting Mr. Westcott in the *Westminster Gazette*. He says:

"This is a matter left in obscurity. Presumably the intention is to lower the selling price of the house, in order that the purchaser may reap the benefit, but in practice there would probably be a contest between all parties concerned.

"At Manchester, Dr. Addison, advocating the principle of 'reasonable' (i. e., economic) rentals for new houses, stated that workmen's wages should be raised in order to enable them to pay such increased rents. Clearly, however, the effect of this would be vastly worse than the operation of any subsidized rents. The difference between the old and new economic rents would probably be over £1 a week; and, assuming that Dr. Addison's suggestion could be put into practice, it is clear that it would be impossible to confine the increased wages to actual householders. In other words, any such increase would be general. As there are, roughly, about 16,000,000 workers (male and female), the aggregate additional burden on industry thereby entailed would be enormous. But all students of social problems know that any such proposals for increased wages would be fought tooth and nail, resulting in strife, agitation, and class feeling. The suggestion, however, is obviously totally impracticable.

"Dr. Addison's 'first-born' Housing Bill has had a most inauspicious career, and the new Bill bids fair to be little more fortunate. Unless it is radically altered and improved in committee, it clearly cannot touch the root of the housing shortage."

While the Government is trying to think the problem through into terms of action, and while the general press continues to cry in large headlines, "Go on with the House," the "Architect" debates the question with Sir Charles Ruthen in the good old vein of the classical economists:

"With much of what Sir Charles Ruthen said in his address to The Society of Architects, on the subject of British House Building Methods, we are in absolute agreement; but we disagree *in toto* with him on certain fundamental issues.

"To begin with, it is comparatively easy to pile statistics upon statistics and to prove, as many speakers do, that there is an immense housing shortage to be made good; every speaker on the subject agrees as to this, while differing in the little sums they make up of our present and future wants. But Sir Charles Ruthen, like many another speaker, is silent as to the reasons which underlie the present shortage, which are, we hold, more important than the amount of the shortage itself if we are to arrive at a permanent settlement of the question once for all. The initial reason for the shortage is that the Finance Act of 1909–10 for the first time in the history of the country interfered with the natural operation of laws of supply and demand by penalizing those who had hitherto made a reasonable profit, and in process of doing so, had provided what was wanted.

"It is useless to argue that a payment of one-fifth of the difference between the improved price of developed and that of undeveloped land is a mere bagatelle; the fact remains that once the principle is accepted, there is no reason why one-quarter, one-third, or even one-half might not in time be demanded. The Government had, in fact, sold the keys of the citadel of security, the security of house property as an investment vanished, mortgages on it were called in, and house property as an investment was 'bear'd.' The result—as to which ample warnings had been given—was apparent in a falling off of one-half, and then a greater and greater proportion, till the national shortage became evident to all, even in the pre-war days. Nor was it fair and just to argue that the houses that had been erected were deficient in planning, design, or accommodation, for the by-laws permitted them, local authorities sanctioned them, and public opinion accepted them. Builders were no more to be blamed for the result than we could blame Columbus because he did not cross the Atlantic in a turbine steamer. It is useless also to point

out that many people in the old days were badly housed. If it were so—and all will admit it was largely because men would not, or could not, pay the market value for more and better accommodation—they can do so now with the greatly increased wages, and the community has no more reason to supply the population with houses at uneconomic rents than to present it with free food or clothing. The State which does so is doomed to bankruptcy, and, if so, the largest and most generous housing policy will be of no avail.

"We say openly and unreservedly that if, in consequence of a continuous reduction of output, the working classes make it impossible to house the people, no fear of threats of revolution should prevent the State from refusing to help those who will not help themselves. The policy we advocate can be expressed in a nutshell: The repeal of the Finance Act; a more equitable system of rating, relieving the enterprising man who develops property and so creates value for the community as well as for himself; and the end of spoon-feeding and subsidies. If the latter can, under the exceptional circumstances, be sanctioned, they should be fair and equal subsidies paid to all, without distinction, who provide what is required, and should be limited to an amount which represents the sum which has to be paid for housing now, as compared with that which will be current when building prices have been reduced after a certain number of years. The State must not compete with its subjects in matters of housing any more than it must supply any section of its subjects, who are not incapable or helpless, with free food and free clothes. This is our answer to the problem which Sir Charles Ruthen states and as to which he draws what we hold to be entirely unfounded conclusions."

Of course, the American reader, if he leans toward this way of thinking, will find solid comfort in the words of the "Architect." But if he is, on the other hand, inquisitive he will ask himself as he would the "Architect" why it is that in the urban centers of America, for example, the same identical situation has arisen as in the case of the urban centers of Europe where in turn "stimulation," "state aid" and finally "outright subsidy" has been resorted to. He would be inclined to ask the "Architect" if there was no fairly good ground for suspicion that the whole system of production, as it has been carried on in the recent past, was not, by degrees, reaching the point of breakdown.

This effort toward bringing about a more adequate environment for the common men in England, when viewed from across the Atlantic, presents some rather interesting aspects. Out of the drift of affairs and things, something resembling a plan is to be seen emerging, but it is a plan of curious design. We have, in this last phase of the effort, that is to say, in the granting of an outright subsidy, a clear indication of a drift into what is sometimes spoken of as the Communistic State, but thus far the drift is confined to those activities which have to do with the *consumption* of certain limited lists of products. While the State is apparently drifting in this direction as regards consumption, the animating forces of production remains individualistic, that is to say, production, as the quoted statement from the "Architect" shows, in order to operate must be animated by the prospect of investment for profit; production must also be carried on according to the well established rule of business enterprise—price competition, etc.

Now the houses are not being built because there is not sufficient prospective profit to be seen in the investment—not at this stage of the game. Hence nothing is being done, notwithstanding the recognized universal need. It is plain enough, if we state the situation in terms of action, that we are dealing with a form of sabotage. Not that anyone willfully intends to curtail production so that rents will eventually rise. It is merely that the present system of production will not operate unless there is good prospect of profit to be derived from investment. This is how the system is kept going.

It is also plain enough that things are working at cross purposes. Just how the Government can function effectively as an organization of consumers while production is carried on by an individualistic system which operates only in those fields where and when there is the prospect of the greatest gain from investment—all this is not plain. It would appear that both groups, the Government and those holding to the classical economists' views as expressed in the "Architect" would have to guess again, both as to what constitutes the cause and how the problem is to be solved.

"But departing from the housing problem, a ray of hope is to be noted in the report of the Committee on Adult Education, appointed by the Ministry of Reconstruction. Take for example the following suggestions from the report of the Committee:

"*Universities.*—A department of extra-mural adult education, with an academic head, should be established at each university. For such education more liberal assistance should be given to universities by the State and local authorities.

"Universities should consider carefully the question of providing residential tutors in those districts in which they carry on a substantial amount of extra-mural work, with a view ultimately to promoting the establishment of local colleges. A larger and more adequately paid staff of tutors and lecturers should be employed. Full-time tutorial class teachers of experience should be paid a fixed salary of not less than £500 a year.

"*Local Authorities.*—Each local authority in Great Britain should be required to submit to the appropriate Central Department a separate scheme for the provision of non-vocational adult education.

"Non-vocational institutes as evening centers for humane studies should be generally established in co-operation with voluntary agencies.

"In these institutes social and recreational activities should be a prominent feature, and music, drama, dance, and handicrafts should be an integral part of the program. University extension courses should be given in the institutes, which are intended for young men and women between the ages of 18 and about 21.

"*Village Institutes.*—As to rural education, the Committee say that the greatest need in the village is a village institute under full public control. The institute should be the headquarters of organized local activities of all kinds.

"It is recommended that the State should make a grant-in-aid to parish or rural district councils, through the county councils, in respect to capital expenditure amount-

ing to 90 per cent of the total cost. This State grant for Great Britain might amount to £5,000,000 or more.

"Summer schools and summer meetings should be extended and summer courses arranged for teachers and others in agricultural and kindred subjects should be widened in their scope.

" 'We do not think,' the Committee says in their general remarks, 'that it is possible or desirable to eliminate from adult education the discussion of controversial questions. Indeed one of the greatest values of adult education is that highly controversial subjects can be freely discussed in an atmosphere of mutual confidence and tolerance. Only in this way are students able to correct their own experience and adapt their points of view to the accepted experience of others.

" 'There ought, we think, to be far wider opportunities for the development of the study of natural science among adult students. Again, we think it desirable to emphasize the place which modern languages should occupy in the sphere of adult education. Moreover, we think it important that adult education should be interpreted in such a way as to include the encouragement of music and languages, of literature and drama, and of craftsmanship. In other words, adult education should cater for the varied needs and tastes of the people.'

"The Committee holds the view that the State should not refuse financial support to institutions, colleges, and classes merely on the ground that they have a particular 'atmosphere' or appeal to students of a particular type. 'All that it ought to ask is that they be concerned with serious study.'

"Sir John L. Green, secretary of the Rural League, has been appointed by Lord Lee, Special Commissioner, to organize measures for the improvement of social and material conditions of village life and the development of rural industries."—F. L. A.

Book Reviews

Church Buildings. By Elmo Cameron Lowe. Chicago: The Methodist Episcopal Church. 1919.

The first of a series of monographs, an attractive pamphlet entitled "Church Buildings," prepared by Elmo Cameron Lowe, of Chicago, bears the imprint of the Bureau of Architecture of the Methodist Episcopal Church. This serves to call attention to the fact that already the Methodists, the Lutherans, and the Episcopalians have awakened to a realization of the fact that church buildings cannot safely be left to chance.

Thus, the recent action of the Methodist Church, in establishing its Bureau of Architecture, is an indication that the idea is growing and that a marked improvement in ecclesiastical architecture may be imminent. At any rate, let us hope so, and be grateful for the fact that several denominations have already recognized the fact that committees of laymen are not competent to judge or to pass finally upon architectural designs.

In the dual function of a place of worship and a place of instruction and recreation, the average modern church problem today presents new requirements for solution. It is true that these may be solved in a practical and economical manner by almost any good architect, but in no class of work is the criticism of the architect and the finished designer more needed.

There are well-meaning advisers who are totally devoid of both training and religious feeling, while there are others who might serve as advisers to the everlasting glory of any denomination. If the adviser be a well-trained architect, and above all a man of good taste and fine understanding, he will be able to help local architects in remote and scattered places very much.

We congratulate the Methodist church upon its newly organized Bureau of Architecture, and feel sure that this sort of coöperation is destined to be of the greatest possible advantage to every community in which religion and art flourish. Albert Kelsey.

News Notes

The Index to Volume VII of the Journal (1919) has been compiled and printed and will be mailed to any subscriber on request.

Many comments have been received from members of the Institute and others, in connection with the report of the Senate's Committee on Public Buildings and Grounds on the operations of the United States Housing Corporation and the work done by architects in connection with that body. The report is generally denounced in unmeasured terms as misleading and maliciously unfair, but pending further action on the part of Congress (which action, we are given to understand, is contemplated), we refrain, for the present, from any further discussion of the subject in these columns.

At its December meeting, the Oregon Chapter voted: "That the Building Laws Committee of the Chapter communicate with the mayor, suggesting that all codes controlling the growth and development of Portland be recodified, bearing in mind the objective of each and that this be done with the aid of city officials or some paid expert or qualified authority."

At the January meeting of the South Carolina Chapter, action was taken in approval of the Institute's stand on

the formation of a national department of public works and on the threatened absorption of the Construction Division of the War Department into some other Government department.

At the same meeting a report was made on a standard form of registration and reciprocity agreement with the Georgia and North Carolina Chapters, as follows:

"That with the exception of the reciprocity clause our present law is clearer and leaves less cause for disagreement as to technical points than the proposed standard law prepared by the Institute Committee, and that the present law having been obtained under difficulties and in operation only two years it is inadvisable to attempt any amendment at this session of the legislature." It was recommended, however, "that the Chapter recommend to the State Board that if in their opinion it was advisable to propose an amendment at this time, they submit such an amendment admitting to state practice architects licensed in another state or architects of eminent qualifications in practice in a state having no registration law, without technical examination, if the Board decided in each case that such examination be unnecessary."

A committee was appointed to confer with the Governor in regard to a proposed measure for establishing a state architectural commission and state architect.

THE Institute is in receipt of a communication from the Chairman of the Senate Committee on Military Affairs which reads as follows: "I am in receipt of your letter of January 10 urging legislation for the maintenance of the Construction Division as a separate service of the Army. I am very glad to inform you that the Committee on Military Affairs has inserted in the Army Reorganization Bill a provision for this purpose."

THE Convention of the National Public Works Department Association, a movement initiated by the technical men of the country to secure the establishment of a national department of public works, was held at the Willard Hotel, Washington, D. C., January 13 and 14.

The American Institute of Architects was represented by Messrs. Edward W. Donn, Jr., E. J. Russell, and Waddy B. Wood. Mr. Russell was appointed a member of the Committee on Resolutions; Mr. Donn a member of the Committee on Text of Bill, and Mr. Wood a member of the Committee on New Organizations.

More than 125 delegates, representing the building professions and manufacturers, were present.

The Convention was marked by harmonious proceedings and a determination to carry on until its object is accomplished. Reports from state chairmen and from delegates who conferred with members of Congress were entirely favorable concerning the trend of public and legislative sentiment.

THE state of Pennsylvania will hold a competiton for the design of the certificate granted by it to architects under the terms of the new registration law. There will be awarded a first and second prize of $200 and $100, respectively. The competition closes on April 1, 1920, and copies of the programme may be had from the State Board of Examiners of Architects, Harrisburg, Pa.

THE National Charity and Welfare Association of Montevideo, Uruguay, announces an international competition for plans of a sanitarium to be devoted exclusively to the cure of convalescents of both sexes over seven years of age.

The cost of the buildings is not to exceed approximately $300,000. Each design must be complete. The competition will be in two stages: first a general competition and, second, one between those whose plans are accepted in the first. Prizes will be awarded in both grades. The jury is composed of the Director of the Board of the Association and five architects. June 30, 1920, is the prescribed date for submissions. Further details may be had from the Uruguayan Legation, Washington, D. C.

ACTION has been taken by the Oregon Chapter in approval of the pending Tinkham Bill (H.R. 7014), designed to create a government bureau of living conditions.

AT its annual meeting in January the Washington State Chapter adopted a resolution further protesting against the use of Institute influence in the promotion of state societies in the state of Washington.

AT its last meeting, the San Francisco Chapter voted, as the sense of the meeting, that the Chapter does not approve the formation of a state society in California.

THE Annual Meeting of the Idaho Society of Architects was held at Boise on January 5 and was well attended. Mr. Burton E. Morse, of Twin Falls, Idaho, was reëlected president.

ONE of the most noteworthy examples of Spanish-Colonial architecture in America, the "House of the Tiles" (Casa de los Azulejos), the palatial and historic old mansion of Mexico City, is shortly to be converted into a modern American drugstore. Although a century and a half old it is said to be beautiful and in an excellent state of preservation. A belief that the Government will eventually take measures to secure its permanent preservation is encouraged by the fact that before alterations were begun photographs of the principal details were taken. It has been leased for twenty years.

THE official organ of the American Institute of Electrical Engineers, formerly called the "*Proceedings*," appears in January in a new form, under the name of the "*Journal of the American Institute of Electrical Engineers*." An editorial announces that "the changes in name, size, and scope constitute one result of the deliberations of the Institute's Committee on Development, which formulated recommendations embodying improvements in the activities of the Institute, based upon the response of the membership to the Committee's request for suggestions."

IT is announced that the competition for the new building for the Temple of the Mystic Shrine at Los Angeles, will be in two stages, and conducted under the Institute Code. Mr. John C. Austin, of Los Angeles, has been chosen adviser and the program will be issued as soon as possible.

NEWS NOTES

In connection with the burning of the French Opera House at New Orleans, designed by James Gallier, and destroyed by fire on Dec. 4, 1919, the Louisiana Chapter has adopted a resolution as follows:

The Chapter recognizes the passing of the old French Opera House as a calamity in the annals of architecture of Old New Orleans and the country at large. The expression from the individual members of the Chapter is of a personal regret in the loss of this landmark of the Vieux Carré that served as a splendid setting for the perpetuation of the ideals of art and culture.

The Chapter recommends that the French Opera House be rebuilt on the old site and that the new building should reproduce the destroyed building, with modern construction. The Chapter also offers its services in an advisory capacity to those bodies interested in rebuilding the Opera House.

The long controversy over the new court house for New York seems settled at last. Mr. Guy Lowell, the winner of the competition, and author of the famous "circular plan," has redrawn the plans, which now call for a hexagonal building with approximately the same accommodations as the original design, but costing only one-third as much, or $7,000,000. The building is to go on part of the original site, and the Board of Estimate, on December 30, authorized the necessary appropriation for its construction which is to proceed as rapidly as possible.

The January meeting of the New York Chapter was very largely devoted to the subject of the New York war memorial and unionism among draftsmen.

C. Grant LaFarge set forth the strange and curious history of the Mayor's Committee on War Memorial. Of visible actions, his account was complete and remarkably illuminating, and considerable light was thrown upon the nature of that thick and murky fog of political obscurity which has surrounded this public enterprise from the beginning and which still surrounds it. Naturally, no one knows what is likely to happen. The names of the Mayor's Committee are not known, except that of Mr. Rodman Wanamaker, the Chairman, nor does one know the names of the Committee on Art, a subcommittee of the Mayor's Committee, nor does one know who is to judge the competition which is now being held. The matter is so obscure that no one may even venture a guess about it.

The admirable statement by Mr. LaFarge regarding this matter had the quality of the Chapter from "The Education of Henry Adams." For the meaning of the action of the Mayor's Committee is apparently as obscure as was the meaning of events to Henry Adams.

The discussion of unionism among draftsmen was a second chapter, so to speak, of what bids fair to be a long and interesting serial story. A fairly accurate, descriptive title for this second installment might be "We Don't Know Where We Are Going, But We're on Our Way." Naturally there were no "conclusions," for this is a serial. The plot thickened, however, and a few new actors appeared upon the scene. Consideration was given to the status of the draftsmen in the "plan factories," of which there are said to be a few in the outlying areas of greater New York. Also the "proletariat" was introduced to the audience as a noise behind the scenes. The center of gravity of the discussion was observed to shift a little; it moved over a bit toward the center of gravity of the problem. And one saw the problem not so much from the standpoint of the "closed shop," etc., as a problem which involved our entire professional organization.

The upshot of this interesting discussion was a resolution authorizing the appointment of a committee of fifteen, composed of five members each of the New York Society of Architects, the Brooklyn Chapter and the New York Chapter of the A. I. A., with power to enlarge its membership by the addition of double that number, or thirty draftsmen. This Committee was asked to consider not merely the question of unionism, but the "state of the profession" with a view of coming to some definite opinion as to what might most effectively clarify thinking before attempting to set down final conclusions in terms of action regarding unionism or any of the other serious problems which confront both architect and draftsman.—F. C. A.

The Reconstruction Commission and the Joint Legislative Committee of the state of New York announce a competition, the object of which is to answer the following questions, taking a typical block of tenements for study:

Since new walls are vastly more expensive than old, can the old shells be remade into light, airy, sanitary, decent homes? If so, what is the most economical way to attain this end, and can it be done in such a way as to encourage remodeling, not only for the resultant better living conditions but to demonstrate its economic value? What size unit, block, group of houses, or single tenement will give the most practical result, and what arrangement of buildings, courts, and yards will give the best environment for decent living? Should the remodeling be carried out by individual owners or groups of owners and with or without the assistance of the community, city, or state?

An actual block of tenements on the lower East Side of New York City has been chosen for study. This block contains tenements of the familiar dumb-bell type, as well as of the earlier railroad type having three-quarters of the rooms borrowing light and air from those on the street or court. More detailed information on the program of this competition will be published in the next number of the Journal. Mr. Clarence S. Stein is secretary of the Housing Committee of the Reconstruction Commission of New York which has this competition in charge.

Structural Service Department

SULLIVAN W. JONES, *Associate Editor*

In connection with professional societies, organized bodies, and the following Committees of the Institute, working toward improvements in building materials and methods, and higher ideals in the sheltering of humanity:
BASIC BUILDING CODE, CONTRACTS, FIRE-PREVENTION, STRUCTURAL SERVICE

Lumber Standards

In the October, 1919, Journal there was a report on the conference of the lumber interests in Chicago, called to consider the adoption of universal standards for commercial lumber. It is gratifying to note that since that conference considerable progress has been made in the direction of establishing these much-needed standards.

The following are excerpts from a recent circular letter addressed by the National Lumber Manufacturers' Association to all of the associations represented at the conference:

"Pressure has been brought to bear on our industry from many sides recently in regard to the subject of standard classification, sizes, and grades for manufactured lumber. Our subscribing associations have been told of the activities of the consumer in attempting to prepare such standards for us. The need of action in the matter by the industry itself was made plain at the general conference on grading held in Chicago on June 30, 1919.

"At that time, the Engineering Bureau of the National Lumber Manufacturers' Association, through Mr. C. E. Paul and Mr. F. C. Harris, was instructed to prepare specifications and a general plan for grading that would satisfy the demands of the consumer without creating a general disturbance in the industry. The following report by the Engineering Bureau of the National Lumber Manufacturers' Association is submitted as a result of resolutions passed by the conference on standardization, as outlined in our letters, File 96.

"The subjects covered in this first report are: Standard Form of Specifications of Grades; Standard Terms of Classification and Definitions; Species Recognized under General Names for Wood; Standard Sizes for Lumber.

"In repreparing these reports, the Engineering Bureau of the National Lumber Manufacturers' Association has conferred with a representative of the American Institute of Architects, a committee of the American Railway Engineers' Association, officials of the U. S. Forest Products Laboratory at Madison, Wis., and has received help and coöperation from experienced graders connected with our subscribing associations. All have given valuable information and suggestions.

"In the preparation of the accompanying report we believe that much has been done to clarify the meaning of terms commonly used with a vague and general meaning, and often with different meanings in different sections of the country. These definitions will not all be in accordance with the usage to which any one association is accustomed, but are recommended as a result of our careful investigation and effort to produce a logical and workable plan of standardization."

As requested by the National Lumber Manufacturers' Association, we transmit herewith to the architectural profession, for its consideration and comment, those portions of the first report which are of direct interest to architects. The request is made that comments and suggestions be addressed to the Chairman of the Structural Service Committee, so that they may be classified and correlated and delivered to the National Lumber Manufacturers' Association.

It is requested that particular attention be given to the recommendation on bringing up the width of the tongue and groove in drop siding to the size of $\frac{3}{8}$ inch to harmonize with the rabbet in shiplap. Should a $\frac{3}{8}$-inch tongue be deemed advisable, the recommended widths of lumber would then be $2\frac{3}{8}$ inches, $3\frac{3}{8}$ inches, $4\frac{3}{8}$ inches, and $5\frac{3}{8}$ inches instead of the widths indicated in the table. The questions are: Is $\frac{3}{8}$-inch lap sufficient for shiplap, and is it desirable to have a $\frac{3}{8}$-inch tongue on drop siding?

Definitions and Classification Terms

In view of the fact that there have been no exact standards for terms in common use in the lumber industry, the following definitions and terms of classification are recommended. They are the result of an extensive study of the various grading rules and classifications of the different associations, and replies to letters of inquiry sent out from this office.

The definition for the term "lumber" is adopted from the rulings of the Interstate Commerce Commission. Many of the terms have been used generally in a sense which would make them overlapping, and others have duplicate meanings. This has been avoided as far as possible in the classification terms here recommended.

The terms of classification are divided into: General Classification Terms, Size Classification, and Manufacturing Classification.

Standard definitions of defects are being worked out by the U. S. Forest Products Laboratories at Madison, Wis., and are not ready to submit to you at this time.

General Classification

Lumber is the product of the saw and planing-mill, not further advanced in manufacture than by sawing, resawing, and passing lengthwise through a standard planing machine, crosscut to length, and end matched.

Lumber is classified as *Yard Lumber*, *Shop* or *Factory Lumber*, and *Structural Timber*. Different grading rules apply to each class of lumber.

Yard Lumber is lumber that is less than six inches in thickness and is intended for general building and construction purposes. The grading of yard lumber is based upon the use of the entire piece.

Shop or *Factory Lumber* is lumber intended to be cut up for use in further manufacture and is graded on the basis of the percentage of the area which will produce a limited number of cuttings of a given minimum size and quality.

Structural Timber is lumber that is six inches or over in thickness and width. The grading of structural timber is based upon the strength of the piece and the use of the entire piece.

Yard Lumber is classified roughly as *Finshing* and *Construction Lumber*.

There is no sharp line between finishing and construction lumber. The medium grades may be used for either purpose.

Finishing is yard lumber of the higher grades in which appearance, perfection of the surface, and finishing qualities are primarily the basis on which the grade is determined. The higher finishing grades are more suitable for "natural" or transparent finishes, while the lower finishing grades are smooth and free from serious defects and are particularly adapted to the use of paint.

Construction Lumber is yard lumber which is graded primarily upon the basis of its strength, as affected by defects, and its fitness for general construction purposes.

Size Classification

Strips are yard lumber less than two inches thick and under eight inches wide. Strips are usually manufactured into matched and patterned lumber.

Boards are yard lumber less than two inches thick and eight inches or over wide.

Planks are yard lumber two inches and under four inches thick and eight inches and over wide.

Scantlings are yard lumber two inches and under six inches thick and under eight inches wide.

Heavy Joists are yard lumber that is four inches and under six inches thick and eight inches or over wide.

Timbers are lumber six inches or larger in their least dimension.

Dimension includes all yard lumber except boards and strips; that is, yard lumber two inches and under six inches thick and of any width.

Manufacturing Classification

Manufactured lumber is classified as Rough, Surfaced, and Worked.

Rough Lumber is undressed lumber left as it comes from the saw.

Surfaced Lumber is lumber that is dressed by running through a planer. It may be surfaced on one side (S1S), two sides (S2S), one edge (S1E), two edges (S2E), or a combination of sides and edges (as S1S1E, S2S1E, or S1S2E).

Worked Lumber is lumber which has been run through a matching machine, sticker, or moulder. Worked lumber may be *matched*, *shiplapped*, or *patterned*. Patterned lumber is usually matched or shiplapped.

Matched Lumber is lumber that is edge dressed and shaped to make a close tongue and groove joint at the edges or ends when laid edge to edge or end to end.

Shiplapped Lumber is lumber that is edge dressed to make a close rabbeted or lap joint when laid edge to edge.

Patterned Lumber is worked lumber that is shaped to a patterned or moulded form.

Standard Names for Varieties of Structural Timber

The standard names for species recognized under general names for wood here proposed are those recommended for adoption by the Committee on Wooden Bridges and Trestles of the American Railway Engineers' Association, and are the same as the standards of the American Society for Testing Materials, except those for cedar, which are not given in the standards of the latter society.

Southern Yellow Pine. This term includes the species of yellow pine growing in the southern states from Virginia to Texas; that is, the pines hitherto known as longleaf pine (*Pinus palustris*), shortleaf pine (*Pinus echinata*), loblolly pine (*Pinus Tæda*), Cuban pine (*Pinus heterophylla*) and pond pine (*Pinus serotina*).

Douglas Fir. The term "Douglas fir" covers the timber known as yellow fir, red fir, western fir, Washington fir, Oregon or Puget Sound fir or pine, Northwest and West Coast fir.

Norway Pine. Covers what is known also as "red pine" and Banksian (*Pinus Banksiana*).

Hemlock. Covers southern or eastern Hemlock, that is, hemlock from all states east of and including Minnesota.

Western Hemlock. Covers hemlock from the Pacific Coast.

Spruce. Covers eastern spruce, that is, the spruce timber coming from points east of and including Minnesota.

Western Spruce. Covers spruce timber from the Pacific Coast.

White Pine. Covers the timber which has hitherto been known as white pine, from Maine, Michigan, Wisconsin, and Minnesota.

Idaho White Pine. Covers the variety of white pine from western Montana, northern Idaho and eastern Washington.

Western Pine. Covers the timber sold as white pine coming from Arizona, California, New Mexico, Colorado, Oregon, and Washington. This is the timber sometimes known as "western yellow pine," or "ponderosa pine," or "California white pine," or "western white pine."

Western Larch. Covers the species of larch or tamarack from the Rocky Mountains and Pacific Coast regions.

Tamarack. Covers the timber known as "tamarack," or "eastern tamarack," from states east of and including Minnesota.

Cedar. Covers white cedars: *Thuya occidentalis*, Maine to Minnesota and northward; *Chamæcyparis thyoides*, Atlantic Coast from Maine to Mississippi; *Chamæcyparis Lawsoniana*, along the coast of Oregon; *Libocedrus decurrens*, Cascades and Sierra Nevada of Oregon and California. Red Cedars: *Thuja gigantea*, Washington to northern California and eastward to Montana; *Juniperus virginiana*, throughout the United States.

Cypress (*Taxodium distichum*). Covers bald cypress, black, white and red cypress from swamp and overflow land along the coast and rivers of the southern states.

Redwood. Includes the California wood usually known by that name.

Tabulation of Association Standard Sizes and Those Recommended for Adoption

The sizes recommended for standards are shown in the right-hand column of the accompanying blue-printed tabu-

lation of sizes of the different associations. We have been guided in its preparation by the discussions at the conference on standardization held on June 30, and by our policy of producing a consistent plan.

The sizes recommended are those generally prevailing in the present standards of the subscribing associations. In 6-inch sizes and under, 3/8 inch is allowed for sawing and surfacing, while 1/2 inch is allowed for sizes of 8 inches and up.

The sizes recommended for common boards and strips, rough or surfaced one side, are the result of a strong demand for a thicker board for use where 3/4-inch shiplap or 11/16-inch boards do not have sufficient strength to meet the requirements. A stronger, stiffer board is needed for roof sheathing in restricted districts which require the use of slate and tile or slag roofing, and for sub-flooring where thin, mosaic finish floors are used, also in places where a designer is not justified in specifying a material heavier than one inch because of the cost involved.

The sizes for dimension, surfaced one side and one edge or surfaced four sides, should be the same in order to make framing lumber all of the same size. The advantage of this plan is obvious where detailing is necessary. Similarly, where strength calculations are made for lumber surfaced on four sides, it applies equally well to lumber surfaced one side and one edge, when used in the same capacity.

A 3/8-inch rabbet is recommended for shiplap in order to allow a wider face than would be possible with a 1/2-inch rabbet. We also recommend that the dropsiding tongue and groove joint be brought up to 3/8 inch to harmonize with the shiplap joint.

It is recommended that 2-inch finish be dressed to 1 5/8 inches to harmonize with the general plan and also because of the convenience it affords in detailing along with common dimension.

It will be noticed that when 1 1/2-inch or 1 1/4-inch or 1-inch material is used double, it makes the same thickness of material as that of twice the nominal size. The sizes generally recommended will enable the adoption of standard details for framing and finishing in common types of construction and is strongly urged by architects. While a general increase in sizes is urged by some parties, we feel that the recommended sizes are entirely adequate and much more economical with the present methods of framing, than would result from such an increase.

ASSOCIATION AND RECOMMENDED STANDARD SIZES FOR LUMBER*

Kind of Lumber	Nominal Size		Recommended Sizes Based on air-dry stock with maximum of 20 per cent moisture	
	Thick	Width	Thick	Width
Common Boards and Strips	1"R	2	11/16	
	1"S1S	3	5/8	
	1"S2S	4	11/16	3 5/16
	1 1/4	5		
	1 1/2	6		5 5/16
		7		
		8		7 1/2
		9		
		10		9 1/2
		12		11 1/2
Dimension	2	2	1 5/16	
	2 1/2	3	2 1/16	
	3	4	2 9/16	3 5/16
	4	5	3 9/16	4 5/16
	5	6	4 9/16	5 5/16
	2R	7	1 3/4	6 5/16
		8		7 1/2
		9		8 1/2
		10		9 1/2
		12		11 1/2
Finish	3/4	4	1/2	3 5/16
	1/2	5	1/2	4 5/16
	5/8	6	1/2	5 5/16
	3/4	7	11/16	6 5/16
	1	8	11/16	7 1/2
	1 1/4	9	1 1/2	8 1/2
	1 1/2	10	1 1/2	9 1/2
	2	12	1 15/16	11 1/2
	2 1/2	14	2 1/16	13 1/2
	3	16	2 9/16	15 1/2

Kind of Lumber	Nominal Size		Recommended Sizes Based on air-dry stock with maximum of 20 per cent moisture	
	Thick	Width	Thick	Width
Flooring	3/8	3		2 1/4
	1/2	4		3 1/4
	5/8	5		4 1/4
	3/4	6	11/16	5 1/4
	1	6	11/16	5 1/2
	1 1/4	7	1 1/2	6 1/2
	1 1/2	8	1 1/2	7 1/2
	2	9	1 15/16	8 1/2
	2 1/2	10	2 1/2	9 1/2
	3	12	2 15/16	11 1/2
	3 1/2	6	3 1/16	5
	4	7	3 1/16	6
		8		7
		9		8
		10		9
		12		11
Ceiling	3/8	3	1/2	2 1/4
	1/2	4	1/2	3 1/4
	5/8	5	1/2	4 1/4
	3/4	6	11/16	5 1/4
	1	7	3/4	6 1/16
Partition	3/8	3	1/2	2 1/4
	1/2	4	1/2	3 1/4
	5/8	5	1/2	4 1/4
	3/4	6	11/16	5 1/4
	1	7	3/4	6 1/16
Grooved Roofing	1	8	11/16	7 1/2
		10		9 1/2
		12		11 1/2

Kind of Lumber	Nominal Size		Recommended Sizes Based on air-dry stock with maximum of 20 per cent moisture	
	Thick	Width	Thick	Width
Fencing	1	3	11/16	2 9/16
	1 1/4	4	1 1/2	3 3/16
	1 1/2	5	1 1/2	4 3/16
		6		5 3/16
Drop Siding, D. & M.	5/8	3	1/2	2 1/4
	3/4	4	11/16	3 1/4
	1	5	3/4	4 1/4
	1 1/4	6		5 1/4
	1 1/2	8		
Drop Siding, Worked Shiplap Rustic	5/8	6		5 1/16
	3/4	7		
	1	8	3/4	7 1/16
		9		
		10		9 1/16
Shiplap	1	4	3/4	3 1/16
		5		
		6		5 1/16
		7		
		8		7 1/16
		9		
		10		9 1/16
		12		11 1/16
	Rabbeted			3/8
Bevel Siding	1/2 1/4 E	3	1/2 & 1/4	
		4		3 1/2
		5		4 1/2
		6		5 1/2
	5/8 1/4 E	4	5/8 & 1/4	
		5		
		6		
	3/4 1/4 E	8		7 1/4
		10		9 1/4
		12		11 1/4

*The standard sizes of the various associations have been omitted from this tabulation.

NOTES.—G refers to green lumber; R refers to rough lumber.